Manitoba Health

Dental Health

Manitoba
Health

MC 14532

1986 ANNUAL REPORT

OF

FLUORIDATED WATER SUPPLIES

IN

MANITOBA

Prepared By:
Jim Senka, B.Sc.
Manitoba Health/Dental Health

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INTRODUCTION

In 1985, thirty-eight Manitoba communities were receiving artificially fluoridated drinking water.

In addition, one Provincial, and two Federal waterworks facilities practiced artificial fluoridation. The Canadian Forces Base at Beausejour was closed in May which explains the reduction in Federal operations from 1985.

This report consists of all the tabulated results from the bi-weekly monitoring program. The results from each water treatment plant were individually sent to the owners of the participating plant, along with a covering letter.

In a few cases, a suggestion was made as to how the operation of the fluoridation equipment could be improved.

Thirty-seven of the forty-two treatment plants were visited/ inspected at least once during 1986. All community administrative staff, water plant operators, as well as Water Services Board Staff and W.M. Ward Technical Services Laboratories Staff were co-operative and helpful.

DISCUSSION

1. Participation in the program

A total of forty-one Manitoba communities, representing over 725,000 people were receiving artificially fluoridated water by the end of 1986. This represents 69% of the total population of the province, and approximately 95% of the population served by a central piped waterworks system. In order to expand the public health benefits of fluoridation, Manitoba Health continued to offer financial support to Manitoba communities wishing to install fluoride feed systems on a first time basis. The waterworks operations were evaluated, systems designed and equipment specified. The Town of Melita and the Village of Shoal Lake ordered equipment in 1986.

2. Monitoring Program

The bi-weekly sampling program was utilized in 1986 to monitor the artificially fluoridated water supplies. The sampling program consists of the submission of a 14 day composite sample and a report sheet containing daily on-site test results and the amount of fluoride chemical used/gallons treated. Water treatment plants experiencing operational problems controlling fluoride levels were visited by Dental Health technical staff to assist in resolving the problem. Visits were productive and waterworks staff were most appreciative of this assistance.

A total of 1,028 fourteen day composite samples were submitted to the W.M. Ward Technical Services Laboratory for fluoride analysis.

3. Areas of Improved Operation

The communities showing an improvement in their fluoride operation (fluoride levels) are listed below.

ALTONA - Twenty-one out of twenty-six two week composite samples tested for fluoride within the operating range of 1.0 to 1.4 mg/l. The 5 samples outside of this range were tested at levels below 1.0 mg/l. With the commissioning of the Red River Regional Water Treatment Plant in Lettellier, Altona began, and will continue to receive a blend of fluoridated water from Neche, North Dakota and unfluoridated water from Letellier until the fluoride feed system in Letellier is incorporated.

CRANBERRY PORTAGE - Sixteen out of twenty samples contained fluoride within the recommended operating range. Thirteen out of twenty-five samples were within the recommended operating range in 1985.

Freezing and breaking open of water mains on occasion in Cranberry Portage causes sudden surges in water consumption. Since the fluoride feed is not increased in proportion in order to conserve chemical, the result is a decrease in fluoride level of the water for a few days. There is no immediate solution to this problem. However since these occurances result only in momentary and minor depletions of the fluoride levels, it is not deemed to be of major concern.

GILLAM - All samples submitted tested for fluoride within the operating range. This marks an improvement over 1985 when fluoride levels in the submitted samples were outside the recommended range 67% of the time. Although actual on-site plant visits were not made, a mechanical problem was disclosed through telphone conversations with the operator and then rectified.

Operations servicing by telephone combined with on-site assistance is positive proof that improvements in the Program are possible.

HARTNEY - Twenty-five out of the twenty-six submitted samples were witnin the operating range. This represents an improvement over 1985 when nineteen out of twenty-four samples contained fluoride levels within the recommended range. Four low readings in 1985 were the result of a bag of powdered sodium fluoride which did not dissolve properly.

KILLARNEY - Seventeen out of twenty-six samples contained fluoride within the acceptable operating range. The number of times that samples contained fluoride within the acceptable limits increased in 1986. Several mechanical problems were disclosed and solved during the year. However it is felt that further attention by, and contact with the operator will be required before the fluoride levels become completely satisfactory.

LAC DU BONNET - Nineteen out of twenty-two samples tested were within the recommended operating range. This is an improvement over 1985, when nine out of seventeen fluoride samples were within the recommended operating range. This can be attributed to the repair of the fluoride test kit as well as a conscientious effort by the operator in solving minor mechanical problems.

PORTAGE LA PRAIRIE - All samples contained fluoride within the correct operating range. Twenty-one out of twenty-four of the samples in 1985 contained fluoride in concentration within the recommended operating range. Part of the reason for the improved fluoride readings in 1986 was the correction of procedural error in operation of the fluoride test kit. The second reason for improvement can be contributed to a change in several of the operational staff.

RIVERS - Some improvement is illustrated by the fact that all of the samples submitted in 1985 contained fluoride in concentration outside the recommended range. However an improvement is better illustrated by a reduction in the range of the fluoride levels from 1.4 to 0.5. The disclosure of several operation/procedural problems, plus the repair of the feed system were the main factors contributing to this improvement. The concern of, and work with the operator during 1987 will produce better results.

TREHERNE - Twenty-two out of twenty-six samples contained fluoride within the correct operating range. This is an improvement over 1985 when eighteen out of twenty-six of the samples contained fluoride within the recommended range. This improvement can be attributed to the understanding and proper use of the saturator system by the operator.

The following communities demonstrated an improvement in control of fluoride levels simply by paying closer attention to the fluoride levels on a day to day basis:

	Samples within limits/submitted	
	1985	1986
ROBLIN	21/26	24/26
RUSSELL	23/25	26/26
SWAN RIVER	20/21	23/26

4. Problem areas

Communities that experienced operational problems with their fluoridation systems and still require assistance are listed below.

The number of samples which contained fluoride in concentration within the recommended range, along with comments are recorded in alphabetical order. These communities will be visited more frequently in 1987 with the objective of finding solutions to the problem:

BOISSEVAIN - Sixteen out of twenty-four samples contained fluoride within the recommended operating range. Fifteen out of seventeen samples were within the recommended operating range in 1985. The fluoride control records indicate a discrepancy between the Technical Services Laboratory and Operators' fluoride readings. The The theoretical content (calculated from the amount of fluoride consumed) indicates that the Technical Services Lab readings are more accurate. This was substantiated when the test kit was repaired and the results became more consistent. The operator has, on many past occasions, been able to repair the test kit, however it is 35 years old, and malfunctions are frequent. Communication has been established with the Town Councillor responsible for water works with the intention of solving the problem.

CARMAN - Twenty-one out of twenty-five samples contained fluoride within the recommended operating range. There were twenty-two out of twenty-three within the recommended operating range in 1985. The four low fluoride results at the beginning of the year indicated a problem. However, the fluoride readings obtained by the operator on these samples indicate that the plant was operating within the established guidelines. Two causes were the use of 1.0 p.p.m. instead of 1.2 standard, and scratched cuvettes which can result in a higher fluoride reading. Both matters were rectified.

DAUPHIN - The original fluoride feed system has for years caused problems in controlling the fluoride levels of the Dauphin water system. Discussion with the Dauphin Engineering Department resulted in the purchase and installation of a state-of-the-art H2SiF6 feed system. Initial results in 1987 indicate that this new system is working very smoothly.

The fluoride levels in the towns listed below were slightly low for the first portion of 1985 because the operators were unaware that the recognized optimum level for fluoride in Manitoba was raised from 1.0 to 1.2 mg/l. Once informed, the Pinawa and Rossburn operators responded and fluoride levels were greatly improved for the remainder of the year. The Virden Town council has opted to remain at the 1.0 mg/l level. Documentation justifying the newer 1.2 level has been made available to Virden. (see letter to Virden)

PINAWA - Thirteen out of twenty-five samples within the recommended operating range.

ROSSBURN - Eighteen out of twenty-four samples within the recommended operating range.

VIRDEN - Nineteen out of twenty-five samples within the recommended operating range.

5. Changes/improvements to program

i. Fluoridation Officer- The responsibility for monitoring and maintenance of the fluoridation program for the past 20 years was provided by Manitoba Environment. This service was discontinued in 1983 and taken over by Manitoba Health. A fluoridation officer was retained in April, 1986.

ii. Fluoridation Seminar- A fluoridation seminar sponsored by the Center for Disease Control in the United States was attended by the Fluoridation officer. The seminar was of 5 days duration and was attended by Fluoridation Specialists from throughout North America. Discussion included state-of-the-art fluoridation equipment as well as state programs and problem solving regarding promotion of fluoridation and operation of fluoridation equipment. In addition, valuable contacts with counterparts throughout North America were established.

iii. Manitoba Water and Waste Seminar - Attendance as an observer gave the Fluoridation Officer the opportunity to renew his contacts with the waterworks operators and make new contacts with operating professionals, equipment suppliers and scientists.

iv. Manitoba Water and Waste School- The Fluoridation Officer presentd a fluoride operating/maintenance lecture at the annual Manitoba water and waste school and when time permitted, audited some of the program for professional development.

v. Use of Computer- The use of a computer was initiated for the compilation of fluoride test results and the listing of communication fluoridating communities adding fluorides to the drinking water in 1986. One letter was sent to all communities offering information regarding the benefits of water fluoridation and state-of-the-art fluoridation equipment. (see- "Promotion")

vi. Loan equipment- Two fluoride field test kits were purchased in 1986, one, a HACH DR-100 fluoride colorimeter was used as a replacement unit for municipalities experiencing problems and requiring repairs to their own test kits. (A second DR-100 test kit was profferred by the Environmental Department on a long term loan basis). Eight requests for the loan of these units were filled in 1986. These loans prevented the temporary shutdown of the municipalities' fluoridation systems for the duration of the repair period.

Another test kit, a highly accurate Hach DR-3 Spectrophotometer was purchased for use by the Fluoridation Officer for verifying the accuracy of fluoride test kits belonging to municipalities.

vii. Transport of Spadns Reagent- the shipping of this reagent from the Technical Services Laboratory came under the Transportation of Dangerous Goods Act in 1986 because of its acid content. As such, this reagent is now shipped in specially packed boxes by courier service, or at times delivered by the Fluoridation Officer.

6. Promotion

After attending the C.D.C. Fluoridation seminar, a letter was sent to all participating towns in October offering up-to-date technical information regarding state-of-the-art fluoridation equipment, chemical suppliers and recent publications on the benefits of fluoridation. Twelve municipalities (Swan River, Dauphin, Treherne, Carman, Lac du Bonnet, Birtle, Melita, Cranberry Portage, Brandon, Ste. Rose du Lac, Winnipeg and the Village of Shoal Lake) requested information on equipment. Requests for information on the benefits of fluoridation were received from three municipalities (Gladstone, Swan River and Neepawa). The development of the computerized mailing list will continue to improve the dissemination of technical information to participating communities and thus the promotion of the program.

The City of Winnipeg Waterworks Department was given the name and phone number of the Dental Health Educator to place in their operators manual so that operators could pass on enquiries regarding fluoridation to Manitoba Health.

In general, participating communities were periodically contacted either by telephone or by personal visits from the Fluoridation Officer throughout the year as a means of promoting more interest in fluoridation and accuracy in feeding.

A presentation on public water fluoridation was given at the bi-annual Dental Health Seminar in June to (over 80) Dental Nurses and Dental Assistants by the Fluoridation Officer. The importance of promoting public water fluoridation and serving as a liason between communities interested in water fluoridation and Manitoba Dental Health was stressed. A lecture on the benefits of public water fluoridation was again presented at the second year Manitoba Water and Waste Water School by the Dental Health Educator.

7. SUPPORT SERVICES

Manitoba Health/Dental Health wishes to acknowledge the support received from other groups and governmental departments who provided assistance with the performance of the fluoridation program:

i. The Technical Services Laboratory for conducting the regular fluoride analyses and shipping reagents, sample bottles and fluoride results to participating communities.

ii. Department of Environment for technical assistance on the past operation and performance of the program, and for the loan of equipment.

iii. Manitoba Water Services Board for the promotion of fluoridation in communities serviced by the Board.

iv. Environmental Health Services, Manitoba Health for engineering consultation and advice with administration, design, installation and trouble shooting in-plant operational mal-functions.

APPENDIX "A"

FLUORIDATED WATER SUPPLIES IN MANITOBA

PROVINCE OF MANITOBA
DEPARTMENT OF HEALTH
COMMUNITIES WITH FLUORIDATED WATER SUPPLIES AS OF DEC. 31, 1986

MUNICIPALITY	STATUS	POPULATION 1981 CENSUS	POPULATION 1986 PROVINCIAL STATISTICS	DATES APPROVAL	DATES ON-LINE	BACKGROUND LEVEL	TYPE OF FEED	TEST KIT	AVG (F) (1986)	WATER SOURCE	OWNERS OF WATER PLANTS
ALTONA	Town		2,968	66 09 19	66 11 04	0.29	H SiF Acid	Nil	1.1	RIVER	*M&SB
BALDUR	Unincorporated Village	344		66 09 19	67 11 15	0.22	NaF 3%	Ha	1.1	WELL	*M&SB
BOISSEVAIN	Town		1,658	56 11 05	57 01 11	0.20	NaF 2.3%	Ha F	1.2	(SI)	TOWN
BRANDON	City		39,425	53 08 11	55 05 06	0.20	Na SiF Dry	Ha	1.2	RIVER	CITY
CARMAN	Town		2,609	65 06 22	65 11 03	0.26	NaF 1.8%	Ha	1.1	RIVER	TOWN
DAUPHIN	Town		9,513	57 08 02	80 05 03	0.14	NaF Slurry	Ha	0.9	(0.65)	
CRANBERRY PORTAGE	U.V.D.	948		83 03 19	83 12 14	LO.10	NaF 2%	Ha C	1.1	SPRING LAKE	TOWN *M&SB
DELORAINE	Town		1,158	67 07 28	68 09 24	0.16	NaF 3%	Ha	1.1	(SI)	*M&SB
ERICKSON	Village		595	72 10 12	73 05 04	0.23	NaF 1.5%	Ha	1.0	WELL	*M&SB
GILLAM	L.G.D.		1,406	74 08 14	84 06 09	LO.10	NaF 4%	Ha	1.1	RIVER	**LGD
GIMLI	Town		1,744	63 08 01	63 12 23	0.45	NaF 3%	Ha Ex	1.1	(AW)	TOWN
GLADSTONE	Town		1,051	71 04 19	76 09 23	0.22	NaF 4%	Ha	1.1	RIVER	TOWN
GRADENFELD	Unincorporated Village	76			76 11 12	0.29	NaF 4%	Nil	1.1	RIVER	*M&SB
GRETNA	Village		572	66 09 19	66 11 04	0.29	NaF 4%	Nil	1.1	RIVER	*M&SB
HAMIOTA	Village		565	70 05 27	70 08 17	0.29	NaF 1%	Ha	1.2	WELL	*M&SB
HARTNEY	Town		542	64 01 02	64 12 16	0.20	NaF 1%	ra	1.2	WELL	TOWN
KILLARNEY	Town		2,493	60 10 12	60 10 25	0.19	NaF 4%	Ha	1.1	LAKE	TOWN
LAC DU BONNET	Town		2,409		65 09	LO.10	NaF	Ha	1.3	WELL	*M&SB
MacGREGOR	Village		899	65 06 03	69 04 16	0.19	NaF 5%	ra	1.2	RIVER	VILLAGE
McCREARY	Village		704	69 08 28	69 11 18	0.24	NaF 5%	Ha	1.2	WELL	*M&SB
MANITOU	Village		845	64 01 21	65 05 13	0.19	NaF 5%	ra	1.2	(SI)	M&SB
MINNEDOSA	Town		2,971	60 01 25	60 07 07	0.28	NaF 5%	Ha F	1.2	WELL	TOWN
MORDEN	Town		5,114	66 09 09	69 11 17	0.32	NaF 4%	Ha F	1.1	LAKE	TOWN
NEEPAWA	Town		3,699	63 06 10	63 07 10	0.24	Na SiF Dry	Ha	1.0	LAKE	TOWN
NEW BERGTHAL	Unincorporated Village	127			76 11 12	0.29	NaF 4%	Nil	1.1	RIVER	*M&SB
PILOT MOUND	Village		797	68 10 25	70 12 21	0.21	NaF 3%	Ha	1.1	(SI)	*M&SB
PINAWA	L.G.D.		2,075	63 11 26	64 01 14	0.08	NaF Dry	Ha	1.0	RIVER	**LGD
PORTAGE	City		13,806	57 12 20	58 01 13	0.20	Na SiF Dry	S.I.E.	1.2	RIVER	CITY
RESTON	Unincorporated Village	589		67 09 13	68 11 26	0.13	NaF 1.5%	Ha	1.1	WELL	*M&SB
RIVERS	Town		1,276	68 06 07	85	0.18	NaF 4%	Ha	0.8	WELL	TOWN
ROBLIN	Town		2,070	69 04 29	70 06 01	0.26	NaF 4%	ra	1.0	WELL	TOWN
ROSSBURN	Village		706		77 12 05	LO.10	NaF 1.5%	Ha	1.0	WELL	*M&SB
RUSSELL	Town		1,884	65 09 10	67 03 01	0.21	NaF 2%	Ha	1.1	WELL	*M&SB
SOMMERFELD	Unincorporated Village	94			76 11 12	0.29	NaF 4%	Nil	1.1	RIVER	*M&SB
SOURIS	Town		1,882	62 07 11	63 11 05	0.19	NaF 3%	Ha C/P	1.1	RIVER	*M&SB
STEINBACH	Town		8,518	59 11 04	60 05 23	0.39	NaF 3%	Ha	1.2	WELL	TOWN
SWAN RIVER	Town		4,720	80 10 07	82 08 08	0.20	NaF 3%	Ha	1.1	WELL	TOWN
THE PAS	Town		7,514	64 07 20	64 07 23	0.25	Na SiF Dry	Ha C/P	1.2	RIVER	TOWN
TREHERNE	Village		761	72 11 10	73 06 11	0.32	NaF 4%	Ha F	1.2	(AW)	VILLAGE
VIRDEN	Town		3,196	71 01 11	71 04 08	0.44	NaF 4%	ra C	1.0	WELL	TOWN
WINKLER	Town		6,811	64 01 21	64 06 24	0.26	NaF 3%	Ha	1.1	WELL	*M&SB
WINNIPEG	City		622,150	56 07 20	56 12 28	0.10	H SiF Acid	S.I.E.	1.0	LAKE	CITY

PROVINCE OF MANITOBA
DEPARTMENT OF HEALTH
COMMUNITIES WITH FLUORIDATED WATER SUPPLIES AS OF DEC. 31, 1986

MUNICIPALITY	STATUS	POPULATION 1981 CENSUS	POPULATION 1986 PROVINCIAL STATISTICS	DATES APPROVAL	DATES ON-LINE	BACKGROUND LEVEL	TYPE OF FEED	TEST KIT	AVG (F) (1986)	WATER SOURCE	OW WA PL
PROVINCIAL											
GIMLI	Ind. Park	600			69 04 16	0.43	NaF 4%	Ha	1.1	WELL	Mar
FEDERAL											
BEAUSEJOUR	C.F.S.	208			68 05 28	0.17	NaF 4%	Ha	1.2	WELL	Fed
GYPSUMVILLE	C.F.S.	330			69 08 28	0.15	NaF 4%	Ha	1.1	RIVER	Fed
SHILO	C.F.S.	3,200			69 01 14	0.12	NaF 4%	T	1.0	WELL	Fed
TOTAL		767,344									

Notes:

The Communities of Altona, Gretna, Gnadenfeld, New Berotnal and Sommerfeld are served by fluoridated water piped in from Necne, North Dakota. This water, which is fluoridated at the Necne water treatment plant, and monitored for fluoride content in Altona, is provided to the above communities under the terms of an agreement between the Manitoba Water Services Board and the City of Necne.

The Red River Regional water Treatment Plant at Letellier, Manitoba which was commissioned in August, 1986 is also capable of supplying these communities. It is expected that the fluoride feed system will be installed in 1987. These communities will receive a blend of water from these two sources until 1990 when a contract with Necne expires.

L means Less Than

HaF:	Hach Filterphotometer	T:	Taylor
Ha:	Hach Spectrophotometer	S.I.E.:	Specific Ion electrode
Ha SX:	Hach Expanded Scale pH/Fluoride Meter (Electrode method)	Ha C/P:	Hach Colorimeter/pH Meter
		Ha C:	Hach DR-100 Colorimeter

*MWSB - Manitoba Water Services Board
**LGD - Local Government District
(SI) - Surface Impoundment creek
(AW) - Artesian well

EXPLANATION OF FLUORIDATION CONTROL DATA

"Tech. Serv. Composite" - Fluoride analysis conducted by the Manitoba Government Technical Services Laboratory on the bi-weekly composite sample submitted by the water plant operator. This composite sample represents a 2-week sampling period, comprised of 14 samples of approximately 65 ml each collected by the water treatment plant operator. (14 day composite is about one litre of treated water)

"Operator Composite" - Fluoride reading reported by the water treatment plant operator on the bi-weekly sample before it is sent to the Technical Services Laboratory.

"Average Daily" - Arithmetic average of the 14 daily fluoride tests conducted by the water treatment plant operator.

"Calculated Dosage" - The fluoride dosage of the water supply, calculated from the weight of chemical added and the amount of water treated.

"Natural Content" - The amount of fluoride in the water before treatment.

"Theoretical Content" - Calculated Dosage plus Natural Content.

APPENDIX "B"

YEAR END SUMMARIES FOR MANITOBA WATER

SERVICES BOARD TREATMENT PLANTS

Manitoba

Health Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Erv Griffin
General Manager
Manitoba Water Services Board
P.O. Box 1059
Brandon, MB
R7A 6A2

Dear Mr. Griffin:

RE: ARTIFICIAL FLUORIDATION AT MANITOBA SERVICES BOARD FACILITIES DURING 1986

Enclosed are data sheets and year-end letters for each Manitoba Water Services Board water treatment facility which practiced artificial fluoridation in 1986.

The fourteen Water Services Board plants artificially adding fluoride to the drinking water were visited at least once in 1986. The operators of all the water treatment plants displayed positive attitudes towards the assistance offered by this department. Based upon my observation I would report that no major problems are evident with the operation of the plants adding fluoride.

I wish to thank you and the Water Services Board staff for being instrumental in promoting the valuable benefit of fluoridation in the communities of Lac du Bonnet and Letellier. I would also like to acknowledge Mr. Dave Schwaluk, Mr. Vince Shih and Mr. Glen Newton for their support with the design and promotion of fluoride systems in several other Manitoba towns.

Many thanks for all your assistance.

Jim Senka, B.Sc.
Fluoridation Officer

JS/mb

Manitoba

Health Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Erv Griffin
General Manager
Manitoba Water Services Board
P.O. Box 1059
Brandon, MB
R7A 6A2

SUBJECT: 1986 FLUORIDE CONTROL DATA FOR ALTONA

The attached data sheet summarizes the 1986 Fluoride program for the Town of Altona.

All of the required 26 bi-weekly samples were submitted by the Water Works Superintendent, Mr. D. Klassen. From October 13 to year-end, the fluoride levels were below the required minimum. This was unavoidable since the Red River Regional Water Treatment plant was partially serving the Town of Altona, and does not yet provide fluoridated water. The fluoride present comes from the fraction of the water which is received from the Necne, N.D. plant.

Only 5, or 15 % of the required samples submitted between January 4 and October 26 contained fluoride in concentrations outside the required range of 1.0 to 1.4 mg/l. This is a significant improvement over 1985 when 20% of the samples were outside of the acceptable range.

I understand from your engineer, Mr. Glen Newton, that the fluoride feed system will be in service at the Red River Regional Water Treatment Plant in 1987.

Jim Senka

Jim Senka, B.Sc.
Fluoridation Officer

JS/mb
attch.
c.c. Mr. Cliff K'Heilly
Mr. Dick Klassen

FLUORIDATION CONTROL RECORD

LOCATION: ALTONA

CHEMICAL: H2Sif6 (Fluosilicic Acid) 25% (NECHE)

TEST KIT: HACH FILTERPHOTOMETER (NECHE)

FLUORIDATOR : Liquid Metronics-Model A-10 (NECHE)

OPERATOR: Dick Klassen (Altona)

TELEPHONE: Office: 324-6633 324-6439
Cliff D'Heilly (NECHE)

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THECRETICAL CONTENT
Jan. 4 - Jan. 17/86	1.33					
Jan. 18 - Jan. 31	1.22					
Feb. 1 - Feb. 14	1.25					
Feb. 15 - Feb. 28	1.20					
Mar. 1 - Mar. 14	1.15					
Mar. 15 - Mar. 30	1.17					
Mar. 31 - Apr. 13	1.00					
Apr. 14 - Apr. 27	1.10					
Apr. 28 - May 11	1.10					
May 12 - May 25	1.20					
May 26 - June 8	1.37					
June 9 - June 22	1.35					
June 23 - July 6	1.50					
July 7 - July 20	1.75					
July 21 - Aug. 3	1.55					
Aug. 4 - Aug. 17	1.05					
Aug. 18 - Aug. 31	1.13					
Sept. 1 - Sept. 14	1.13					
Sept. 15 - Sept. 28	1.12					
Sept. 29 - Oct. 12	1.00					
Oct. 13 - Oct. 26	0.98					
Oct. 27 - Nov. 9	0.73					
Nov. 10 - Nov. 23	0.74					
Nov. 24 - Dec. 7	0.81					
Dec. 8 - Dec. 21	0.90					
Dec. 22 - Jan. 4/87	0.85					

Average	1.1					
Range	0.7 - 1.7					
% Outside Recommended Limits	15%					
No. of Samples	26					

Manitoba

Health Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Erv Griffin
General Manager
Manitoba Water Services Board
P.O. Box 1059
Brandon, Manitoba
R7A 6A2

SUBJECT: 1986 FLUORIDE CONTROL DATA FOR BALDUR

The attached data sheet summarizes the 1986 Fluoride program for the Town of Baldur.

25 of the 26 required bi-weekly samples were submitted. All contained fluoride in concentrations within the required range of 1.0 to 1.4 mg/l.

The Water Treatment Plant Operator, Mr. DeBaets has done an excellent job maintaining the proper fluoride level for the Town of Baldur.

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Adolphe DeBaets

FLUORIDATION CONTROL RECORD

LOCATION: BALDUR
CHEMICAL: NaF 3%
TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W&T A-588
OPERATOR: Adolph DeBaets
TELEPHONE: Office: 535-2176 Res: 535-2480
Shop: 535-2482

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	-	-	-	-	-	-
Jan. 18 - Jan. 31	1.18	-	1.20	1.30	0.22	1.52
Feb. 1 - Feb. 14	1.15	1.20	1.20	1.21	0.22	1.43
Feb. 15 - Feb. 28	1.20	1.20	1.20	1.28	0.22	1.50
Mar. 1 - Mar. 14	1.17	1.10	1.05	1.25	0.22	1.47
Mar. 15 - Mar. 30	1.12	1.00	1.00	1.31	0.22	1.53
Mar. 31 - Apr. 13	1.18	1.00	1.00	1.21	0.22	1.43
Apr. 14 - Apr. 27	1.06	1.00	1.00	1.30	0.22	1.52
Apr. 28 - May 11	1.05	1.00	1.00	1.19	0.22	1.41
May 12 - May 25	1.00	1.00	1.00	1.25	0.22	1.47
May 26 - June 8	1.15	1.20	1.05	1.31	0.22	1.53
June 9 - June 22	1.00	1.10	1.10	1.09	0.22	1.31
June 23 - July 6	1.00	1.10	1.07	1.08	0.22	1.30
July 7 - July 20	1.03	1.10	1.07	1.27	0.22	1.49
July 21 - Aug. 3	1.10	1.05	1.08	1.29	0.22	1.51
Aug. 4 - Aug. 17	1.08	1.05	1.08	1.25	0.22	1.47
Aug. 18 - Aug. 31	1.05	1.05	1.07	1.11	0.22	1.33
Sept. 1 - Sept. 14	1.17	1.05	1.07	1.11	0.22	1.33
Sept. 15 - Sept. 28	1.08	1.05	1.07	1.19	0.22	1.41
Sept. 29 - Oct. 12	1.08	1.05	1.07	1.31	0.22	1.53
Oct. 13 - Oct. 26	1.05	1.05	1.06	1.24	0.22	1.46
Oct. 27 - Nov. 9	1.05	1.05	1.06	1.18	0.22	1.40
Nov. 10 - Nov. 23	1.05	1.05	1.06	1.31	0.22	1.53
Nov. 24 - Dec. 7	1.00	1.05	1.05	1.18	0.22	1.40
Dec. 8 - Dec. 21	1.04	1.05	1.05	1.19	0.22	1.41
Dec. 22 - Jan. 4/87	0.95	1.05	1.04	1.19	0.22	1.41

Average	1.1	1.1	1.1	1.2		1.4
Range	1.0 - 1.2	1.0 - 1.2	1.0 - 1.2	1.1 - 1.3		1.3 - 1.5
% Outside Recommended Limits	0%					
No. of Samples	25	24	25	25		25

Manitoba

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(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Erv Griffin
General Manager
Manitoba Water Services Board
P.O. Box 1059
Brandon, Manitoba
R7A 6A2

SUBJECT: 1986 FLUORIDE CONTROL DATA FOR CRANBERRY PORTAGE

The attached data sheet summarizes the 1986 fluoride control program for the U.V.D. of Cranberry Portage.

19 of the required 21 bi-weekly composite samples were submitted. Of these, 4, or 20% contained fluoride in concentrations outside the acceptable range of 1.0 to 1.4 mg/l.

The fluoride system was turned off for part of period 8 (April 14 - 27) to conserve fluoride when a water main broke open.

The fluoride system was also shut down for July 7 to September 14 because the mixer broke loose and damaged the fluoride mixing tank.

There were more samples in 1986 that contained fluoride in concentrations outside the acceptable range vs. 1985. My impression, however, is that the Operator, Mr. Nagy, is conscientious and will endeavor to improve the situation when possible.

Jim Senka

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Dixie Nagy

FLUORIDATION CONTROL RECORD

LOCATION: CRANBERRY PORTAGE

CHEMICAL: NaF 2%

TEST KIT: Hach DR-100 Colorimeter

FLUORIDATOR : W&T Series 44-747 Ser# LDP7591

OPERATOR: Mr. Dixie Nagy

TELEPHONE: Home: 472-3453 WTP: 472-3621
Office: 472-3219

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.12	1.00	1.10	0.69	0.10	0.79
Jan. 18 - Jan. 31	0.86	0.80	0.78	0.30	0.10	0.40
Feb. 1 - Feb. 14	1.12	1.05	1.12	0.81	0.10	0.91
Feb. 15 - Feb. 28	-	1.01	0.98	0.78	0.10	0.88
Mar. 1 - Mar. 14	1.16	1.01	0.98	1.09	0.10	1.19
Mar. 15 - Mar. 30	1.10	1.19	1.13	0.78	0.10	0.88
Mar. 31 - Apr. 13	1.17	1.18	1.12	-	0.10	-
Apr. 14 - Apr. 27	0.76	0.75	1.06	0.91	0.10	1.01
Apr. 28 - May 11	1.07	1.12	1.16	0.94	0.10	1.04
May 12 - May 25	1.05	1.13	1.11	0.87	0.10	0.97
May 26 - June 8	1.06	1.19	1.10	0.90	0.10	1.00
June 9 - June 22	1.04	1.12	1.06	0.56	0.10	0.66
June 23 - July 6	0.89	1.02	0.97	0.35	0.10	0.45
July 7 - July 20	-	-	-	-		-
July 21 - Aug. 3	-	-	-	-	-	-
Aug. 4 - Aug. 17	-	-	-	-	-	-
Aug. 18 - Aug. 31	-	-	-	-	-	-
Sept. 1 - Sept. 14	-	-	-	-	-	-
Sept. 15 - Sept. 28	0.66	0.75	0.79	0.92	0.10	1.02
Sept. 29 - Oct. 12	1.04	1.02	1.06	0.80	0.10	0.90
Oct. 13 - Oct. 26	1.12	1.16	1.19	0.71	0.10	0.81
Oct. 27 - Nov. 9	1.15	1.09	1.11	0.79	0.10	0.89
Nov. 10 - Nov. 23	1.13	1.16	1.18	0.78	0.10	0.88
Nov. 24 - Dec. 7	1.08	1.16	1.13	0.74	0.10	0.84
Dec. 8 - Dec. 21	1.25	1.20	1.13	0.75	0.10	0.85
Dec. 22 - Jan. 4/87	1.15	1.15	1.16	0.79	0.10	0.89

Average	1.0	1.0	1.0	0.8		0.86
Range	0.7 - 1.3	0.7 - 1.2	0.9 - 1.2	0.3 - 1.1		0.4 - 1.2
% Outside Recommended Limits	20%					
No. of Samples	20	22	21	20		20

Manitoba

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File 7.2.1.

March 16, 1987

Mr. Erv Griffin
General Manager
Manitoba Water Services Board
P.O. Box 1059
Brandon, Manitoba
R7A 6A2

SUBJECT: 1986 FLUORIDATION CONTROL DATA FOR DELORAINE

The attached data sheet summarizes the 1986 fluoride program for the Town of Deloraine.

25 of the required 26 bi-weekly composite samples were submitted. Of these, 4, or 15 % contained fluoride in concentration outside the acceptable range of 1.0 to 1.4 mg/l.

The Water Treatment Plant Operator Mr. Arnold has once again done a good job of maintaining the proper fluoride level in the Deloraine drinking water.

Jim Senka, B.sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Bill Arnold

FLUORIDATION CONTROL RECORD

LOCATION: DELORAINE
CHEMICAL: NaF 3%
TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W&T A-745
OPERATOR: Bill Arnold
TELEPHONE: Plant: 747-2062

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	0.95	1.20	1.12	0.99	0.16	1.15
Jan. 18 - Jan. 31	1.17	1.20	1.17	0.88	0.16	1.04
Feb. 1 - Feb. 14	1.20	1.20	1.20	0.91	0.16	1.07
Feb. 15 - Feb. 28	1.10	1.20	1.19	1.08	0.16	1.24
Mar. 1 - Mar. 14	1.03	1.15	1.16	0.98	0.16	1.14
Mar. 15 - Mar. 30	0.99	1.20	1.20	1.05	0.16	1.21
Mar. 31 - Apr. 13	1.00	1.20	1.20	0.82	0.16	0.98
Apr. 14 - Apr. 27	1.04	1.02	1.02	0.90	0.16	1.06
Apr. 28 - May 11	1.15	1.15	1.20	1.03	0.16	1.19
May 12 - May 25	1.09	1.20	1.20	1.07	0.16	1.23
May 26 - June 8	1.15	1.20	1.20	0.89	0.16	1.05
June 9 - June 22	1.18	1.20	1.20	0.98	0.16	1.14
June 23 - July 6	1.10	1.20	1.20	0.96	0.16	1.12
July 7 - July 20	1.25	1.20	1.20	1.03	0.16	1.19
July 21 - Aug. 3	1.20	1.20	1.20	1.08	0.16	1.24
Aug. 4 - Aug. 17	1.08	1.02	1.20	1.12	0.16	1.23
Aug. 18 - Aug. 31	0.85	1.20	1.20	0.98	0.16	1.12
Sept. 1 - Sept. 14	0.85	1.20	1.20	0.93	0.16	1.09
Sept. 15 - Sept. 28	1.08	1.20	1.20	1.02	0.16	1.18
Sept. 29 - Oct. 12	1.05	1.20	1.20	1.32	0.16	1.48
Oct. 13 - Oct. 26	1.01	1.20	1.20	0.90	0.16	1.06
Oct. 27 - Nov. 9	0.84	1.20	1.20	1.21	0.16	1.37
Nov. 10 - Nov. 23	1.06	1.20	1.20	1.12	0.16	1.28
Nov. 24 - Dec. 7	0.90	1.00	1.14	0.99	0.16	1.15
Dec. 8 - Dec. 21	1.04	1.20	1.14	0.78	0.16	0.94
Dec. 22 - Jan. 4/87	1.08	1.15	1.16	0.97	0.16	1.13

Average	1.1	1.2	1.2	1.0		1.2
Range	0.9 - 1.3	1.0 - 1.2	1.1 - 1.2	0.8 - 1.3		0.9 - 1.5
% Outside Recommended Limits	15%					
No. of Samples	26	26	26	26		26

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File 7.2.1.

March 16, 1987

Mr. Erv Griffin
General Manager
Manitoba Water Services Board
P.O. Box 1059
Brandon, Manitoba
R7A 6A2

SUBJECT: 1986 FLUORIDE CONTROL DATA FOR ERICKSON

The attached data summarizes the 1986 fluoride program for the Town of Erickson.

24 of the required 26 bi-weekly composite samples were submitted. Of these, 4, or 17% contained fluoride in concentration below the acceptable range.

The operator's field reports indicate that the out-of-range readings are not being detected at the water plant. I plan to meet with the Operator, Mr. Furewick, to review the operation of the fluoride test kit with him.

Mr. Furewick has been helpful in the past, and will be of assistance in helping me to determine the source of error. In general, Mr. Furewick has done a good job of operating the fluoride feed equipment for the Town of Erickson.

Jim Senka

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Marland Furewick

FLUORIDATION CONTROL RECORD

LOCATION: ERICKSON
FLUORIDATOR : W&T A-588 Ser# NN296
CHEMICAL: NaF 1.5%
OPERATOR: Marland Furewick
TEST KIT: Hach Spectrophotometer
TELEPHONE: Res: 636-2409 Plant: 636-2971

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	-	-	-	-	-	-
Jan. 18 - Jan. 31	-	-	-	-	-	-
Feb. 1 - Feb. 14	0.93	1.10	1.11	0.60	0.23	0.83
Feb. 15 - Feb. 28	1.06	1.10	1.11	0.60	0.23	0.83
Mar. 1 - Mar. 14	1.00	1.12	1.11	0.72	0.23	0.95
Mar. 15 - Mar. 30	0.83	1.02	1.03	0.78	0.23	1.01
Mar. 31 - Apr. 13	1.05	1.04	1.02	0.79	0.23	1.02
Apr. 14 - Apr. 27	1.14	1.10	1.13	0.79	0.23	1.02
Apr. 28 - May 11	1.00	1.12	1.13	0.75	0.23	0.98
May 12 - May 25	1.12	1.08	1.06	0.69	0.23	0.92
May 26 - June 8	1.03	1.10	1.13	0.69	0.23	0.92
June 9 - June 22	0.96	1.10	1.10	0.72	0.23	0.95
June 23 - July 6	1.03	1.12	1.14	0.79	0.23	1.02
July 7 - July 20	1.10	1.12	1.12	0.79	0.23	1.02
July 21 - Aug. 3	1.45	1.14	1.14	0.75	0.23	0.98
Aug. 4 - Aug. 17	0.77	1.18	1.19	0.80	0.23	1.03
Aug. 18 - Aug. 31	1.00	1.06	1.04	0.75	0.23	0.98
Sept. 1 - Sept. 14	1.03	-	1.13	0.77	0.23	1.00
Sept. 15 - Sept. 28	1.10	1.10	1.11	0.77	0.23	1.00
Sept. 29 - Oct. 12	1.45	1.10	1.10	0.66	0.23	0.89
Oct. 13 - Oct. 26	1.20	1.14	1.11	0.77	0.23	1.00
Oct. 27 - Nov. 9	0.66	1.12	1.19	0.80	0.23	1.03
Nov. 10 - Nov. 23	1.20	1.10	1.11	0.66	0.23	0.89
Nov. 24 - Dec. 7	1.23	1.12	1.06	0.66	0.23	0.89
Dec. 8 - Dec. 21	1.45	1.22	1.20	0.66	0.23	0.89
Dec. 22 - Jan. 4/87	1.00	1.20	1.18	0.67	0.23	0.90

Average	1.1	1.1	1.1	0.7		0.9
Range	0.7 - 1.5	1.0 - 1.2	1.0 - 1.2	0.6 - 0.8		0.8 - 1.0
% Outside Recommended Limits	17%					
No. of Samples	24	23	24	24		24

Manitoba

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File 7.2.1

March 16, 1987

Mr. Erv Griffin
General Manager
Manitoba Water Services Board
P.O. Box 1059
Brandon, Manitoba
R7A 6A2

SUBJECT: 1986 FLUORIDE CONTROL DATA FOR HAMIOTA

The attached data summarizes the 1986 fluoride program for the Town of Hamiota.

16 of the required 19 bi-weekly composite samples were submitted. Of these, 4, or 17% contained fluoride in concentration outside the recommended range of 1.0 to 1.4 mg/l.

The operator's field reports indicate that the out-of-range readings are not being detected at the water plant.

The Water Treatment Plant Supervisor, Mr. Frank Hutchinson has been co-operative regarding the operation of the fluoridation equipment, and I am sure he will be helpful in working with me to solve this small problem when I visit the Hamiota Plant. In general, Mr. Hutchinson has done a good job of maintaining the fluoride equipment for the Town of Hamiota.

Jim Senka

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Frank Hutchinson

FLUORIDATION CONTROL RECORD

LOCATION: HAMIOTA
CHEMICAL: NaF 1% (0.8%)
TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W&T A-745
OPERATOR: Frank Hutchison
TELEPHONE: Plant: 764-2531 Home: 764-2496
764-3281

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.07	1.25	1.20	0.74	0.29	1.03
Jan. 18 - Jan. 31	1.33	1.27	1.22	0.80	0.29	1.09
Feb. 1 - Feb. 14	1.22	1.25	1.20	0.77	0.29	1.06
Feb. 15 - Feb. 28	1.29	1.20	1.20	0.71	0.29	1.00
Mar. 1 - Mar. 14	1.15	1.20	1.22	0.61	0.29	0.90
Mar. 15 - Mar. 30	1.02	1.20	1.18	0.55	0.29	0.84
Mar. 31 - Apr. 13	1.10	1.15	1.19	0.63	0.29	0.92
Apr. 14 - Apr. 27	1.65	1.25	1.23	0.80	0.19	1.09
Apr. 28 - May 11	0.97	1.15	1.10	0.70	0.29	0.99
May 12 - May 25	-	1.22	1.20	1.01	0.29	1.30
May 26 - June 8	-	-	-	-	-	-
June 9 - June 22	-	-	-	-	-	-
June 23 - July 6	-	-	-	-	-	-
July 7 - July 20	-	-	-	-	-	-
July 21 - Aug. 3	-	-	-	-	-	-
Aug. 4 - Aug. 17	-	-	-	-	-	-
Aug. 18 - Aug. 31	-	-	-	-	-	-
Sept. 1 - Sept. 14	1.50	1.00	1.03	0.62	0.29	0.91
Sept. 15 - Sept. 28	1.12	-	1.01	0.68	0.29	0.97
Sept. 29 - Oct. 12	0.94	1.00	0.41	1.60	0.29	1.89
Oct. 13 - Oct. 26	0.97	1.00	0.34	0.37	0.29	0.66
Oct. 27 - Nov. 9	1.08	1.00	0.95	0.19	0.29	0.48
Nov. 10 - Nov. 23	1.20	1.20	1.03	0.60	0.29	0.89
Nov. 24 - Dec. 7	1.04	1.00	1.03	0.53	0.29	0.82
Dec. 8 - Dec. 21	1.00	1.05	1.04	0.11	0.29	0.40
Dec. 22 - Jan. 4/87	0.88	1.01	1.07	0.80	0.29	1.09
Average	1.1	1.2	1.1	0.8		1.1
Range	0.9 - 1.7	1.0 - 1.3	1.0 - 1.2	0.1 - 1.6		0.4 - 1.9
% Outside Recommended Limits	17%					
No. of Samples	18	18	19	19		19

Manitoba

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(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Ery Griffin
General Manager
Manitoba Water Service Board
P.O. Box 1059
Brandon, Manitoba
R7A 6A2

SUBJECT: 1986 FLUORIDE CONTROL DATA FOR LAC DU BONNET

The attached data sheet summarizes the 1986 fluoride program for the Village of Lac du Bonnet.

22 of the required 26 bi-weekly composite samples were submitted. Of these, only 2, or 9% contained fluoride in concentration outside the recommended range of 1.0 to 1.4 mg/l. One sample (period July 7 - 20) was broken in transit.

This data illustrates a vast improvement over 1985 when 47% of the samples contained fluoridation in concentration outside the acceptable range of 1.0 to 1.4 mg/l.

Mr. George Towle, the Water Plant Operator, is to be commended for having done a very good job of maintaining the fluoride level of the Lac du Bonnet drinking water.

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. George Towle

FLUORIDATION CONTROL RECORD

LOCATION: LAC DU BONNET
CHEMICAL: 3% NaF
TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W & T
OPERATOR: George Towle
TELEPHONE: 345-8395

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	-	0.78	0.90	1.33	-	-
Jan. 18 - Jan. 31	1.13	1.03	1.01	1.25	-	-
Feb. 1 - Feb. 14	1.20	1.13	1.04	1.13	-	-
Feb. 15 - Feb. 28	-	1.06	1.11	0.84	-	-
Mar. 1 - Mar. 14	1.17	1.28	1.09	1.23	-	-
Mar. 15 - Mar. 30	1.13	1.26	1.15	1.15	-	-
Mar. 31 - Apr. 13	1.30	1.04	1.20	1.24	-	-
Apr. 14 - Apr. 27	1.23	1.18	1.17	1.44	-	-
Apr. 28 - May 11	-	1.15	1.24	1.33	-	-
May 12 - May 25	1.28	1.11	1.14	1.24	-	-
May 26 - June 8	1.33	1.13	1.19	1.29	-	-
June 9 - June 22	1.40	1.28	1.23	1.36	-	-
June 23 - July 6	1.25	1.38	1.41	0.99	-	-
July 7 - July 20	-	1.25	1.32	0.88	-	-
July 21 - Aug. 3	1.20	1.29	1.33	1.61	-	-
Aug. 4 - Aug. 17	0.99	1.42	1.14	1.04	-	-
Aug. 18 - Aug. 31	1.22	1.00	1.10	1.34	-	-
Sept. 1 - Sept. 14	1.35	1.20	1.18	1.19	-	-
Sept. 15 - Sept. 28	1.55	1.30	1.29	1.40	-	-
Sept. 29 - Oct. 12	1.37	1.29	1.32	1.31	-	-
Oct. 13 - Oct. 26	1.13	1.22	1.16	1.82	-	-
Oct. 27 - Nov. 9	1.23	1.04	1.00	1.12	-	-
Nov. 10 - Nov. 23	1.20	1.08	0.96	1.24	-	-
Nov. 24 - Dec. 7	1.47	1.26	1.26	1.53	-	-
Dec. 8 - Dec. 21	1.32	1.34	1.14	1.19	-	-
Dec. 22 - Jan. 4/87	1.23	1.22	1.18	1.78	-	-

Average	1.2	1.2	1.2	1.3		
Range	1.0 - 1.5	0.8 - 1.4	0.9 - 1.4	0.8 - 1.8		
% Outside Recommended Limits	9%					
No. of Samples	22	26	26	26		

Manitoba

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(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Erv Griffin
General Manager
Manitoba Water Services Board
P.O. Box 1059
Brandon, Manitoba
R7A 6A2

SUBJECT: 1986 FLUORIDATION CONTROL DATA FOR MANITOU

The attached data sheet summarizes the 1986 fluoride program for the Town of Manitou.

All of the required 26 bi-weekly samples were submitted. All samples with the exception of period 4 contained fluoride in concentration within the acceptable range of 1.0 - 1.4 mg/l.

Period number 4 (February 15 - 28) shows a high fluoride reading. however, the theoretical content (1.1) based on the amount of fluoride solution fed vs. the amount of water treated indicates a problem with the sample itself. Since the operator's reading was also high, a contaminated sample is indicated.

Mr. Percy Lea, the Water Treatment Plant Operator has, for the second year in a row, done an excellent job of maintaining the fluoride levels of the treated water for the Town of Manitou.

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Percy Lea

FLUORIDATION CONTROL RECORD

LOCATION: MANITOU
CHEMICAL: NaF 3%
TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W&T A-747
OPERATOR: Percy N. Lea
TELEPHONE: Plant: 242-2885

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.11	1.16	1.16	1.25	0.19	1.44
Jan. 18 - Jan. 31	1.13	1.15	1.16	0.96	0.19	1.15
Feb. 1 - Feb. 14	1.15	1.14	1.16	0.95	0.19	1.14
Feb. 15 - Feb. 28	(3.50)	1.62	1.15	0.92	0.19	1.11
Mar. 1 - Mar. 14	1.08	1.12	1.17	0.95	0.19	1.14
Mar. 15 - Mar. 30	1.16	1.15	1.17	0.97	0.20	1.17
Mar. 31 - Apr. 13	1.15	1.25	1.26	0.72	0.21	0.93
Apr. 14 - Apr. 27	1.17	1.10	1.15	1.06	0.21	1.25
Apr. 28 - May 11	1.18	1.16	1.16	1.03	0.19	1.22
May 12 - May 25	1.18	1.11	1.18	0.91	0.21	1.12
May 26 - June 8	1.20	1.17	1.16	0.94	0.22	1.16
June 9 - June 22	1.18	1.00	1.14	1.02	0.21	1.23
June 23 - July 6	1.18	1.18	1.18	0.95	0.26	1.21
July 7 - July 20	1.18	1.19	1.20	1.00	0.25	1.25
July 21 - Aug. 3	1.08	1.15	1.19	0.90	0.28	1.18
Aug. 4 - Aug. 17	1.08	1.18	1.15	0.86	0.22	1.08
Aug. 18 - Aug. 31	1.17	1.18	1.17	1.14	0.23	1.37
Sept. 1 - Sept. 14	1.10	1.16	1.20	0.89	0.24	1.13
Sept. 15 - Sept. 28	1.12	1.17	1.19	0.95	0.23	1.18
Sept. 29 - Oct. 12	1.00	1.20	1.20	0.83	0.26	1.09
Oct. 13 - Oct. 26	1.05	1.14	1.19	0.94	0.22	1.16
Oct. 27 - Nov. 9	1.18	1.22	1.21	0.89	0.22	1.11
Nov. 10 - Nov. 23	1.18	1.19	1.18	0.85	0.25	1.10
Nov. 24 - Dec. 7	1.08	1.18	1.20	0.93	0.24	1.17
Dec. 8 - Dec. 21	1.15	1.19	1.19	0.87	0.33	1.20
Dec. 22 - Jan. 4/87	1.15	1.20	1.19	0.92	0.25	1.17

Average	1.1	1.2	1.2	1.0		1.2
Range	1.0 - 1.2	1.0 - 1.6	1.1 - 1.3	0.7 - 1.3		0.9 - 1.4
% Outside Recommended Limits	0%					
No. of Samples	26	26	26	26		26

Manitoba

Health Dental Health

3rd Floor
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R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Erv Griffin
General Manager
Manitoba Water Services Board
P.O. Box 1059
Brandon, Manitoba
R7A 6A2

SUBJECT: 1986 FLUORIDE CONTROL DATA FOR MCCREARY

The attached data summarizes the 1986 fluoride program for the Village of McCreary.

All of the required 26 bi-weekly samples were submitted. All contained fluoride in concentration within the acceptable range of 1.0 to 1.4 mg/l.

This is the second year in a row that the operator, Mr. Ivan Harper, has maintained the level of fluoride in the treated water within the correct range for the whole year.

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Ivan Harper

FLUORIDATION CONTROL RECORD

LOCATION: MCCREARY
CHEMICAL: NaF 3%
TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W&T A-588
OPERATOR: Ivan Harper
TELEPHONE: Office: 835-2341

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.18	1.15	1.20	0.83	0.24	1.07
Jan. 18 - Jan. 31	1.16	1.22	1.20	0.95	0.24	1.19
Feb. 1 - Feb. 14	1.20	1.13	1.19	0.99	0.24	1.23
Feb. 15 - Feb. 28	1.15	1.17	1.17	0.92	0.24	1.16
Mar. 1 - Mar. 14	1.08	1.23	1.22	1.01	0.24	1.25
Mar. 15 - Mar. 30	1.25	1.15	1.23	1.03	0.24	1.27
Mar. 31 - Apr. 13	1.34	1.25	1.26	0.72	0.24	0.96
Apr. 14 - Apr. 27	1.17	1.25	1.21	1.11	0.24	1.35
Apr. 28 - May 11	1.10	1.15	1.12	0.73	0.24	0.97
May 12 - May 25	1.10	1.21	1.14	0.96	0.24	1.20
May 26 - June 8	1.16	1.09	1.16	0.94	0.24	1.18
June 9 - June 22	1.18	1.19	1.20	0.95	0.24	1.19
June 23 - July 6	1.10	1.17	1.16	0.97	0.24	1.21
July 7 - July 20	1.28	1.25	1.20	1.01	0.24	1.25
July 21 - Aug. 3	1.32	1.29	1.15	1.09	0.24	1.33
Aug. 4 - Aug. 17	1.18	1.20	1.16	0.97	0.24	1.21
Aug. 18 - Aug. 31	1.18	1.25	1.19	0.98	0.24	1.22
Sept. 1 - Sept. 14	1.25	1.15	1.22	0.97	0.24	1.21
Sept. 15 - Sept. 28	1.13	1.18	1.14	0.91	0.24	1.15
Sept. 29 - Oct. 12	1.02	1.25	1.13	0.98	0.24	1.22
Oct. 13 - Oct. 26	1.08	1.15	1.18	0.99	0.24	1.23
Oct. 27 - Nov. 9	1.14	1.09	1.19	1.00	0.24	1.24
Nov. 10 - Nov. 23	1.20	1.23	1.23	0.98	0.24	1.22
Nov. 24 - Dec. 7	1.20	1.23	1.24	0.97	0.24	1.21
Dec. 8 - Dec. 21	1.20	1.29	1.21	0.99	0.24	1.23
Dec. 22 - Jan. 4/87	1.25	1.10	1.22	0.98	0.24	1.22

Average	1.2	1.2	1.2	1.0		1.2
Range	1.0 - 1.3	1.1 - 1.3	1.1 - 1.3	0.7 - 1.1		1.0 - 1.4
% Outside Recommended Limits	0%					
No. of Samples	26	26	26	26		26

Manitoba

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(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Erv Griffin
General Manager
Manitoba Water Services Board
P.O. Box 1059
Brandon, Manitoba
R7A 6A2

SUBJECT: 1986 FLUORIDE CONTROL DATA FOR PILOT MOUND

The attached data summarizes the 1986 fluoride control data for the Village of Pilot Mound.

All of the required 26 bi-weekly samples were submitted. Of these, 4, or 15% contained fluoride in concentrations below the acceptable range of 1.0 to 1.4 mg/l.

The Water Treatment Plant Operator, Mr. Gary Odlum was unaware that the optimum recommended level for fluoride in Manitoba drinking water had been raised from 1.0 to 1.2 mg/l. Since my visit to the Pilot Mound Plant in June, 1986, all samples submitted have contained fluoride in concentrations within the correct range.

I am satisfied that Mr. Odlum is doing a very good job of maintaining and operating the fluoride feed system in an effective manner.

Jim Senka

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Gary Odlum

FLUORIDATION CONTROL RECORD

LOCATION: PILOT MOUND
FLUORIDATOR : W&T A-588
CHEMICAL: NaF 3%
OPERATOR: Gary Odlum
TEST KIT: Hach Spectrophotometer
TELEPHONE: Plant: 825-2115

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.11	1.13	1.13	0.82	0.21	1.03
Jan. 18 - Jan. 31	0.99	1.09	1.11	0.82	0.21	1.03
Feb. 1 - Feb. 14	1.10	1.12	1.13	0.77	0.21	0.98
Feb. 15 - Feb. 28	1.01	1.08	1.10	0.77	0.21	0.98
Mar. 1 - Mar. 14	1.05	1.10	1.10	0.73	0.21	0.94
Mar. 15 - Mar. 30	0.95	1.09	1.09	0.81	0.21	1.02
Mar. 31 - Apr. 13	1.05	1.04	1.10	0.80	0.21	1.01
Apr. 14 - Apr. 27	0.89	1.08	1.07	0.80	0.21	1.01
Apr. 28 - May 11	0.93	1.06	1.08	0.81	0.21	1.02
May 12 - May 25	1.04	1.08	1.08	0.71	0.21	0.92
May 26 - June 8	1.05	1.09	1.11	0.73	0.21	0.94
June 9 - June 22	0.82	1.17	1.16	0.33	0.21	0.54
June 23 - July 6	1.01	1.26	1.22	0.63	0.21	0.84
July 7 - July 20	1.20	1.27	1.29	0.73	0.21	0.94
July 21 - Aug. 3	1.20	1.22	1.26	0.69	0.21	0.90
Aug. 4 - Aug. 17	1.32	1.31	1.33	0.79	0.21	1.00
Aug. 18 - Aug. 31	1.34	1.26	1.27	0.74	0.21	0.95
Sept. 1 - Sept. 14	1.25	1.28	1.26	0.75	0.21	0.96
Sept. 15 - Sept. 28	1.25	1.25	1.27	0.75	0.21	0.96
Sept. 29 - Oct. 12	1.25	1.20	1.19	1.13	0.35	1.48
Oct. 13 - Oct. 26	1.17	1.20	1.23	1.28	0.23	1.51
Oct. 27 - Nov. 9	1.23	1.10	1.20	1.26	0.24	1.50
Nov. 10 - Nov. 23	1.25	1.26	1.27	0.69	0.21	0.90
Nov. 24 - Dec. 7	1.23	1.24	1.26	0.66	0.21	0.87
Dec. 8 - Dec. 21	1.22	1.27	1.26	0.76	0.21	0.97
Dec. 22 - Jan. 4/87	1.28	1.25	1.26	0.74	0.21	0.95

Average	1.1	1.2	1.2	0.8		1.0
Range	0.9 - 1.4	1.0 - 1.3	1.1 - 1.3	0.7 - 1.3		0.5 - 1.5
% Outside Recommended Limits	15%					
No. of Samples	26	26	26	26		26

Manitoba

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3rd Floor
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(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Erv Griffin
General Manager
Manitoba Water Services Board
P.O. Box 1059
Brandon, Manitoba
R7A 6A2

SUBJECT: 1986 FLUORIDE CONTROL DATA FOR RESTON

The attached data summarizes the 1986 fluoride program for the Village of Reston.

25 of the required 26 bi-weekly samples were submitted. All contained fluoride in concentrations within the acceptable range of 1.0 to 1.4 mg/l.

Mr. Ken Moore, Water Treatment Plant Operator, is to be commended for having done an excellent job of maintaining and operating the fluoridation equipment for Reston.

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Ken Moore

FLUORIDATION CONTROL RECORD

LOCATION: RESTON
CHEMICAL: NaF 1.5% (1.43%)
TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W&T A-745 LDP 102
OPERATOR: Ken Moore
TELEPHONE: Plant: 877-3862

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.13	1.20	1.18	0.97	0.13	1.10
Jan. 18 - Jan. 31	1.09	1.20	1.20	1.01	0.13	1.14
Feb. 1 - Feb. 14	1.00	1.15	1.19	1.01	0.13	1.14
Feb. 15 - Feb. 28	1.10	1.22	1.21	1.01	0.13	1.14
Mar. 1 - Mar. 14	1.17	1.25	1.22	0.97	0.13	1.10
Mar. 15 - Mar. 30	1.13	1.17	1.19	0.95	0.13	1.08
Mar. 31 - Apr. 13	1.18	1.20	1.20	1.01	0.13	1.14
Apr. 14 - Apr. 27	0.97	1.15	1.18	0.99	0.13	1.12
Apr. 28 - May 11	1.10	1.20	1.20	0.95	0.13	1.08
May 12 - May 25	1.17	1.05	1.16	0.97	0.13	1.10
May 26 - June 8	1.14	1.15	1.19	0.86	0.13	0.99
June 9 - June 22	1.00	1.14	1.18	0.91	0.13	1.04
June 23 - July 6	1.05	1.18	1.20	0.88	0.13	1.01
July 7 - July 20	1.12	1.15	1.19	1.04	0.13	1.17
July 21 - Aug. 3	1.10	1.20	1.19	0.95	0.13	1.08
Aug. 4 - Aug. 17	-	1.25	1.20	0.90	0.13	1.03
Aug. 18 - Aug. 31	1.13	1.25	1.20	0.90	0.13	1.03
Sept. 1 - Sept. 14	1.35	1.20	1.20	0.99	0.13	1.12
Sept. 15 - Sept. 28	1.18	1.08	1.18	0.96	0.13	1.09
Sept. 29 - Oct. 12	1.25	1.18	1.20	1.00	0.13	1.13
Oct. 13 - Oct. 26	1.15	1.20	1.20	0.99	0.13	1.12
Oct. 27 - Nov. 9	1.13	1.20	1.19	1.00	0.13	1.13
Nov. 10 - Nov. 23	1.17	1.20	1.20	0.97	0.13	1.10
Nov. 24 - Dec. 7	1.20	1.25	1.20	0.93	0.13	1.06
Dec. 8 - Dec. 21	1.25	1.18	1.17	0.95	0.13	1.08
Dec. 22 - Jan. 4/87	1.15	1.15	1.17	0.97	0.13	1.10

Average	1.1	1.2	1.2	1.0		1.1
Range	1.0 - 1.4	1.1 - 1.3	1.2 - 1.2	0.9 - 1.0		1.0 - 1.1
% Outside Recommended Limits	0%					
No. of Samples	25	26	26	26		26

Manitoba

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File 7.2.1

March 10, 1987

Mr. Erv Griffin
General Manager
Manitoba Water Services Board
P.O. Box 1059
Brandon, Manitoba
R7A 6A2

SUBJECT: 1986 FLUORIDE CONTROL DATA FOR ROSSBURN

The attached data summarizes the 1986 fluoride program for the Village of Rossburn.

24 of the required 26 bi-weekly samples were submitted. Of these, 6, or 25% contained fluoride in concentration outside the acceptable range of 1.0 to 1.4 mg/l.

The Water Treatement Plant Operator, Mr. Joiner was unaware that the acceptable range had been changed to 1.0 to 1.2 mg/l in 1985, and was informed verbally in June, 1986. Since that time, the fluoride levels in the treated water have improved somewhat.

Note that the technical services composite reading from December 22 - January 4, 1987 does not coincide with the operator's composite reading, or the theoretical content (based on the amount of fluoride fed and the amount of water treated). As such one can assume that the lab analysis does not represent the actual fluoride level in the treated water.

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Doug Joiner

FLUORIDATION CONTROL RECORD

LOCATION: ROSSBURN
CHEMICAL: NaF 1.5%
TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W&T A-745
OPERATOR: Doug Joiner
TELEPHONE: Plant: 859-2273

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	-	-	-	-	-	-
Jan. 18 - Jan. 31	1.07	0.97	0.98	0.73	-	-
Feb. 1 - Feb. 14	0.80	0.98	0.99	0.53	-	-
Feb. 15 - Feb. 28	0.90	0.98	0.98	0.73	-	-
Mar. 1 - Mar. 14	0.94	0.98	0.98	0.75	-	-
Mar. 15 - Mar. 30	1.00	0.98	0.98	0.76	0.10	0.86
Mar. 31 - Apr. 13	0.94	0.97	0.97	0.59	0.17	0.76
Apr. 14 - Apr. 27	1.00	0.98	0.98	0.80	0.10	0.80
Apr. 28 - May 11	0.93	0.99	0.98	0.75	0.10	0.85
May 12 - May 25	1.00	1.00	1.00	0.81	0.10	0.91
May 26 - June 8	1.05	1.01	1.04	0.67	0.10	0.77
June 9 - June 22	0.96	0.99	1.01	0.75	0.10	0.85
June 23 - July 6	-	-	-	-	-	-
July 7 - July 20	1.05	1.00	1.00	0.78	0.10	0.88
July 21 - Aug. 3	0.93	-	-	-	-	-
Aug. 4 - Aug. 17	1.00	1.03	1.05	0.84	0.10	0.94
Aug. 18 - Aug. 31	1.04	1.20	1.02	5.12	0.10	5.22
Sept. 1 - Sept. 14	1.19	1.05	1.05	2.43	0.10	2.53
Sept. 15 - Sept. 28	1.40	1.01	1.03	0.72	0.10	0.82
Sept. 29 - Oct. 12	1.08	1.07	1.07	-	-	-
Oct. 13 - Oct. 26	0.86	1.04	1.06	0.86	0.10	0.96
Oct. 27 - Nov. 9	1.05	1.01	1.04	0.75	0.10	0.85
Nov. 10 - Nov. 23	1.06	1.01	1.02	0.77	0.10	0.87
Nov. 24 - Dec. 7	1.65	1.05	1.06	0.79	0.10	0.89
Dec. 8 - Dec. 21	1.00	1.07	1.07	0.79	0.10	0.89
Dec. 22 - Jan. 4/87	0.18	1.02	1.02	0.75	0.10	0.85
Average	1.0	1.0	1.0	1.0		1.2
Range	0.8 - 1.7	1.0 - 1.2	1.0 - 1.1	0.5 - 5.1		0.8 - 5.2
% Outside Recommended Limits	33%					
No. of Samples	24	23	23	22		18

Manitoba

Health Dental Health

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(204) 945-6685

File 7.2.1

March 10, 1987

Mr. Erv Griffin
General Manager
Manitoba Water Services Board
P.O. Box 1059
Brandon, Manitoba
R7A 6A2

SUBJECT: 1986 FLUORIDE CONTROL DATA FOR RUSSELL

The attached data summarizes the 1986 fluoride program for the Town of Russell.

All of the required 26 bi-weekly samples were submitted. All contained fluoride within the acceptable range of 1.0 to 1.4 mg/l.

Mr. Harold Schrader, the Water Treatment Plant Operator is to be commended for doing an excellent job of maintaining and operating the fluoridation equipment for the Village of Russell in 1986.

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Harold Schrader

FLUORIDATION CONTROL RECORD

LOCATION: RUSSELL
CHEMICAL: NaF 2%
TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W&T A-747
OPERATOR: Harold Schrader
TELEPHONE: Plant: 773-3185

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.02	1.10	1.10	-	-	-
Jan. 18 - Jan. 31	1.08	1.20	1.14	2.02	0.21	2.23
Feb. 1 - Feb. 14	1.07	1.15	1.14	1.98	0.21	2.19
Feb. 15 - Feb. 28	0.99	1.20	1.11	1.59	0.21	1.80
Mar. 1 - Mar. 14	1.05	1.15	1.18	1.10	0.21	1.31
Mar. 15 - Mar. 30	0.95	1.10	1.14	0.90	0.21	1.10
Mar. 31 - Apr. 13	1.08	1.15	1.16	0.85	0.21	1.06
Apr. 14 - Apr. 27	1.03	1.10	1.22	1.17	0.21	1.38
Apr. 28 - May 11	1.00	1.10	1.19	1.28	0.21	1.49
May 12 - May 25	1.14	1.15	1.22	0.83	0.21	1.04
May 26 - June 8	1.33	1.30	1.24	1.53	0.21	1.74
June 9 - June 22	1.18	1.30	1.28	1.30	0.21	1.51
June 23 - July 6	1.23	1.15	1.21	1.14	0.21	1.35
July 7 - July 20	1.24	1.20	1.25	1.27	0.21	1.46
July 21 - Aug. 3	1.25	1.25	1.24	1.20	0.21	1.41
Aug. 4 - Aug. 17	1.14	1.20	1.18	0.97	0.21	1.18
Aug. 18 - Aug. 31	1.17	1.20	1.18	1.13	0.21	1.34
Sept. 1 - Sept. 14	1.24	1.30	1.23	1.07	0.21	1.28
Sept. 15 - Sept. 28	1.00	-	1.10	0.96	0.21	1.17
Sept. 29 - Oct. 12	1.00	-	-	0.96	0.21	1.17
Oct. 13 - Oct. 26	0.98	1.10	1.10	1.02	0.21	1.23
Oct. 27 - Nov. 9	1.08	1.20	1.12	1.12	0.21	1.33
Nov. 10 - Nov. 23	1.26	1.20	1.15	1.06	0.21	1.27
Nov. 24 - Dec. 7	1.35	1.30	1.20	1.07	0.21	1.28
Dec. 8 - Dec. 21	1.38	1.30	1.27	1.22	0.21	1.43
Dec. 22 - Jan. 4/87	1.28	1.25	1.24	1.13	0.21	1.34

Average	1.1	1.2	1.2	1.2		1.4
Range	1.0 - 1.4	1.1 - 1.3	1.1 - 1.3	0.8 - 2.0		1.0 - 2.2
% Outside Recommended Limits	0%					
No. of Samples	26	24	25	25		25

Manitoba

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(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Erv Griffin
General Manager
Manitoba Water Services Board
P.O. Box 1059
Brandon, Manitoba
R7A 6A2

SUBJECT: 1986 FLUORIDE CONTROL DATA FOR WINKLER

The attached data represents the 1986 fluoride program for the Town of Winkler.

All of the required 26 bi-weekly samples were submitted. All contained fluoride in concentration within the acceptable range of 1.0 to 1.4 mg/l.

Mr. Jake Loewen, the Water Treatment Plant Operator is to be commended for having done an excellent job of maintaining and operating the fluoridation equipment for Winkler for the second year in a row.

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Jake Loewen

FLUORIDATION CONTROL RECORD

LOCATION: WINKLER
CHEMICAL: NaF 3%
TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W&T A-747 (2Feeders) Ser #CG15630
OPERATOR: Jake Loewen
TELEPHONE: Plant: 325-8711 Home: 325-8000

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.20	1.09	1.07	0.72	0.26	0.98
Jan. 18 - Jan. 31	1.13	1.05	1.00	0.69	0.26	0.95
Feb. 1 - Feb. 14	1.08	1.02	1.00	0.69	0.26	0.95
Feb. 15 - Feb. 28	1.20	1.09	1.03	0.76	0.26	1.02
Mar. 1 - Mar. 14	1.13	1.02	1.00	0.68	0.26	0.94
Mar. 15 - Mar. 30	1.15	1.02	0.97	0.66	0.26	0.92
Mar. 31 - Apr. 13	1.15	1.07	1.02	0.70	0.26	0.96
Apr. 14 - Apr. 27	1.13	1.02	1.01	0.75	0.26	1.01
Apr. 28 - May 11	1.13	1.03	1.02	0.75	0.26	1.01
May 12 - May 25	1.10	1.00	1.00	0.75	0.26	1.01
May 26 - June 8	0.95	0.99	0.94	0.75	0.26	1.01
June 9 - June 22	1.00	0.91	0.92	0.75	0.26	1.01
June 23 - July 6	1.00	0.91	0.90	0.74	0.26	1.00
July 7 - July 20	1.07	0.95	0.94	0.72	0.26	0.98
July 21 - Aug. 3	0.99	0.88	0.91	0.66	0.26	0.92
Aug. 4 - Aug. 17	1.14	0.96	1.00	0.74	0.26	1.00
Aug. 18 - Aug. 31	1.18	1.10	0.97	0.70	0.26	0.96
Sept. 1 - Sept. 14	1.07	0.98	0.90	0.69	0.26	0.95
Sept. 15 - Sept. 28	1.21	1.00	1.01	0.73	0.26	0.99
Sept. 29 - Oct. 12	0.95	1.08	1.03	0.74	0.26	1.00
Oct. 13 - Oct. 26	1.15	1.02	1.04	0.74	0.26	1.00
Oct. 27 - Nov. 9	1.20	1.12	1.03	0.72	0.26	0.98
Nov. 10 - Nov. 23	1.10	1.00	0.98	0.70	0.26	0.96
Nov. 24 - Dec. 7	1.17	1.09	1.03	0.74	0.26	1.00
Dec. 8 - Dec. 21	1.17	1.26	1.20	0.71	0.26	0.97
Dec. 22 - Jan. 4/87	1.17	1.32	1.24	0.73	0.26	0.99
Average	1.1	1.0	1.0	0.7		1.0
Range	1.0 - 1.2	0.9 - 1.3	0.9 - 1.2	0.7 - 0.8		0.9 - 1.0
% Outside Recommended Limits	0%					
No. of Samples	26	26	26	26		26

APPENDIX "C"

YEAR END SUMMARIES FOR COMMUNITY-OWNED

TREATEMENT PLANTS

Manitoba

Health Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Gerald May
Secretary - Treasurer
Town of Boissevain
P.O. Box 490
Boissevain, Manitoba
ROK OEO

Dear Sir:

RE: 1986 FLUORIDE CONTROL DATA FOR BOISSEVAIN

The attached, for review by your Mayor and Council is a data sheet summarizing the 1986 fluoride program for the Town of Boissevain.

25 of the required 26 bi-weekly composite samples were submitted. Of these, 8, or 35% contained fluoride concentrations outside the acceptable range of 1.0 to 1.4 mg/l.

The difference in readings between the technical services and the operator on the same samples illustrates an on-going problem with the test kit.

Your Water Works Superintendant, Mr. Barry Chinner has done a good job of keeping the fluoridation equipment operating.

Yours truly,

Jim Senka

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
c.c. Mr. Barry Chinner

FLUORIDATION CONTROL RECORD

LOCATION: BOISSEVAIN
CHEMICAL: NaF 2.3%
TEST KIT: Hach Filterphotometer

FLUORIDATOR : W&T A-747
OPERATOR: Barry Chinner
TELEPHONE: Town Off: 534-2433 Shop: 534-2380
Plant: 534-6762

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.10	1.00	1.16	0.69	0.20	0.89
Jan. 18 - Jan. 31	0.88	1.00	1.04	0.90	0.20	1.10
Feb. 1 - Feb. 14	1.20	1.15	1.23	0.62	0.20	0.82
Feb. 15 - Feb. 28	1.01	1.15	1.22	0.71	0.20	0.91
Mar. 1 - Mar. 14	1.03	1.20	1.12	0.93	0.20	1.13
Mar. 15 - Mar. 30	0.67	0.90	1.04	0.58	0.20	0.78
Mar. 31 - Apr. 13	0.97	1.05	0.98	0.71	0.20	0.91
Apr. 14 - Apr. 27	1.00	0.90	1.05	0.76	0.20	0.96
Apr. 28 - May 11	1.15	0.85	0.93	0.77	0.20	0.97
May 12 - May 25	1.00	0.60	0.80	0.83	0.20	1.03
May 26 - June 8	0.85	0.50	0.71	0.58	0.20	0.78
June 9 - June 22	0.93	0.40	0.62	0.74	0.20	0.94
June 23 - July 6	0.86	0.30	0.32	0.37	0.20	0.57
July 7 - July 20	1.75	-	0.81	1.21	0.20	1.41
July 21 - Aug. 3	-	-	-	-	0.20	-
Aug. 4 - Aug. 17	1.05	0.70	0.92	0.64	0.20	0.84
Aug. 18 - Aug. 31	1.40	1.05	1.08	1.18	0.20	1.38
Sept. 1 - Sept. 14	-	-	-	-	-	-
Sept. 15 - Sept. 28	-	-	-	-	-	-
Sept. 29 - Oct. 12	1.33	0.60	0.85	0.94	0.20	1.14
Oct. 13 - Oct. 26	1.64	0.50	0.67	0.86	0.20	1.06
Oct. 27 - Nov. 9	1.60	1.30	-	1.14	0.20	1.34
Nov. 10 - Nov. 23	1.43	1.25	1.30	0.88	0.20	1.08
Nov. 24 - Dec. 7	1.23	0.90	1.05	1.21	0.20	1.41
Dec. 8 - Dec. 21	1.38	1.00	1.05	1.12	0.20	1.32
Dec. 22 - Jan. 4/87	1.20	1.20	1.18	1.15	0.20	1.35

Average	1.1	0.9	0.9	1.6		1.9
Range	0.7 - 1.8	0.3 - 1.3	0.1 - 1.3	0.7 - 2.8		0.9 - 3.0
% Outside Recommended Limits	35%					
No. of Samples	23	21	21	22		22

Manitoba

Health Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Ian Ford
Brandon City Clerk
P.O. Box 960
Brandon, Manitoba
R7N 0M0

Dear Sir:

RE: 1986 FLUORIDE CONTROL DATA FOR BRANDON

Attached, for review by your Mayor and Council is a data sheet summarizing the 1986 fluoride program for the City of Brandon.

All of the required 26 bi-weekly composite samples were submitted, all contained fluoride in concentrations within the acceptable range of 1.0 to 1.4 mg/l.

The Water Works Supervisor, Mr. Herb Gerling and his staff are to be congratulated once again for an excellent record.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Herb Gerling

FLUORIDATION CONTROL RECORD

LOCATION: BRANDON
FLUORIDATOR : W&T A-690
CHEMICAL: Na2Sif6 (Dry)
OPERATOR: Herb Gerling
TEST KIT: Hach Spectrophotometer
TELEPHONE: Plant: 728-7424

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THECRETICAL CONTENT
Jan. 4 - Jan. 17/86	1.25	1.40	1.22	1.05	0.20	1.25
Jan. 18 - Jan. 31	1.07	1.18	1.19	1.06	0.20	1.26
Feb. 1 - Feb. 14	1.15	1.24	1.20	1.06	0.20	1.26
Feb. 15 - Feb. 28	1.35	1.26	1.22	1.21	0.20	1.41
Mar. 1 - Mar. 14	1.33	1.32	1.18	1.31	0.20	1.51
Mar. 15 - Mar. 30	1.17	1.25	1.24	1.19	0.20	1.39
Mar. 31 - Apr. 13	1.22	1.26	1.16	1.15	0.20	1.35
Apr. 14 - Apr. 27	1.25	1.20	1.10	1.11	0.20	1.31
Apr. 28 - May 11	1.28	1.25	1.10	1.19	0.20	1.39
May 12 - May 25	1.17	1.30	1.14	1.16	0.20	1.36
May 26 - June 8	1.16	1.26	1.08	1.07	0.20	1.27
June 9 - June 22	1.09	1.22	1.12	1.08	0.20	1.28
June 23 - July 6	1.23	1.14	1.04	1.05	0.20	1.25
July 7 - July 20	1.14	1.28	1.09	1.11	0.20	1.31
July 21 - Aug. 3	1.20	1.33	1.20	1.18	0.20	1.38
Aug. 4 - Aug. 17	1.22	1.19	1.13	1.10	0.20	1.30
Aug. 18 - Aug. 31	1.18	1.22	1.16	1.15	0.20	1.35
Sept. 1 - Sept. 14	1.20	1.15	1.10	1.15	0.20	1.35
Sept. 15 - Sept. 28	1.34	1.32	1.15	1.22	0.20	1.42
Sept. 29 - Oct. 12	1.14	1.18	1.13	1.14	0.20	1.34
Oct. 13 - Oct. 26	1.05	1.25	1.12	1.15	0.20	1.35
Oct. 27 - Nov. 9	1.00	1.17	1.06	1.03	0.20	1.23
Nov. 10 - Nov. 23	1.00	1.02	1.09	1.09	0.20	1.29
Nov. 24 - Dec. 7	1.04	1.12	1.10	1.15	0.20	1.35
Dec. 8 - Dec. 21	1.17	1.22	1.15	1.12	0.20	1.32
Dec. 22 - Jan. 4/87	1.17	1.20	1.06	1.17	0.20	1.37

Average	1.1	1.2	1.1	1.1		1.3
Range	1.0 - 1.3	1.0 - 1.4	1.0 - 1.2	1.1 - 1.3		1.2 - 1.4
% Outside Recommended Limits	0%					
No. of Samples	26	26	26	26		26

Manitoba

Health | Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Bruce Lyle
Secretary - Treasurer
Town of Carman
P.O. Box 160
Carman, Manitoba
ROG 0J0

Dear Sir:

RE: 1986 FLUORIDE CONTROL DATA FOR CARMAN

Attached, for review by your Mayor and Council is a data sheet summarizing the 1986 fluoride program for the Town of Carman.

25 of the required 26 bi-weekly composite samples were submitted. Of these, 4, or 16% contained fluoride in concentration below the correct range. This problem was resolved when a faulty fluoride pump motor was replaced.

Mr. Dennis Bell, the Water Treatment Plant Supervisor has done a very good job of maintaining and operating the fluoride equipment for the Town of Carman.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Dennis Bell

FLUORIDATION CONTROL RECORD

LOCATION: CARMAN

CHEMICAL: NaF 1.8%

TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W&T A-748 Ser# KK16902

OPERATOR: Dennis Bell

TELEPHONE: Plant: 745-2481

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	0.77	1.00	0.92	0.79	0.21	1.00
Jan. 18 - Jan. 31	0.85	1.10	1.01	0.36	0.21	0.57
Feb. 1 - Feb. 14	0.85	1.35	1.02	0.83	0.21	1.04
Feb. 15 - Feb. 28	1.13	1.00	1.15	1.13	0.21	1.33
Mar. 1 - Mar. 14	-	1.15	1.14	1.28	0.21	1.49
Mar. 15 - Mar. 30	1.05	1.10	1.12	1.04	0.26	1.30
Mar. 31 - Apr. 13	0.93	1.30	1.15	0.98	0.27	1.25
Apr. 14 - Apr. 27	1.00	1.10	1.10	0.72	0.22	0.94
Apr. 28 - May 11	1.12	0.95	1.18	1.59	0.21	1.80
May 12 - May 25	1.22	1.20	1.17	0.88	0.21	1.09
May 26 - June 8	1.30	1.30	1.38	1.62	0.21	1.83
June 9 - June 22	1.30	1.40	1.29	2.05	0.21	2.26
June 23 - July 6	1.45	1.30	1.51	1.95	0.21	2.16
July 7 - July 20	1.00	1.00	1.09	1.39	0.21	1.60
July 21 - Aug. 3	1.08	1.25	1.30	1.49	0.21	1.70
Aug. 4 - Aug. 17	1.14	1.10	1.28	1.15	0.21	1.36
Aug. 18 - Aug. 31	1.13	1.15	1.27	1.30	0.21	1.51
Sept. 1 - Sept. 14	1.10	1.30	1.20	1.26	0.21	1.47
Sept. 15 - Sept. 28	1.40	1.40	1.38	1.25	0.21	1.46
Sept. 29 - Oct. 12	1.28	1.35	1.35	1.23	0.21	1.44
Oct. 13 - Oct. 26	1.20	1.35	1.34	1.51	0.21	1.72
Oct. 27 - Nov. 9	1.20	1.40	1.39	0.93	0.21	1.14
Nov. 10 - Nov. 23	1.00	1.10	1.21	1.00	0.21	1.21
Nov. 24 - Dec. 7	1.13	1.25	1.24	1.05	0.21	1.26
Dec. 8 - Dec. 21	0.99	1.25	1.27	1.04	0.21	1.25
Dec. 22 - Jan. 4/87	1.00	1.35	1.28	1.56	0.21	1.77

Average	1.1	1.2	1.2	1.1		1.4
Range	0.8 - 1.5	1.0 - 1.4	0.9 - 1.4	0.4 - 2.1		0.6 - 2.3
% Outside Recommended Limits	16%					
No. of Samples	25	26	26	25		25

Manitoba

Health | Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Alex Dmitruk
Secretary - Treasurer
Town of Dauphin
21 - 2nd Avenue, N.W.
Dauphin, Manitoba
R7N 1H1

Dear Sir:

RE: 1986 FLUORIDE CONTROL DATA FOR DAUPHIN

Attached, for review by yor Mayor and Council is a date sheet summarizing the 1986 fluoride program for the Town of Dauphin.

All of the 19 required composite samples were submitted. Of these, 15, or 80% contained fluoride in concentrations below the acceptable range of 1.0 to 1.4 mg/l.

Due to persistent mechanical problems, the system was shut down on September 29, 1986 and a new system was ordered.

A recent conversation with Mr. Eugene Mayuk, Waterworks Superintendent, indicates that the new system is in place and working well.

The Mayor and Council of Dauphin and Mr. Ray Storozinski, Town Engineer, are to be commended for up-grading the fluoride system in order to better provide this valuable public health benefit for the people of Daupnin.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Ray Storozinski
Mr. Eugene Mayuk

FLUORIDATION CONTROL RECORD

LOCATION: DAUPHIN

CHEMICAL: NaF (Slurry) 44%

TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W&T A-690

OPERATOR: Eugene Mayuk - Town Supt.

TELEPHONE: Ray Storizinski - Town Eng.
Office: 638-3601

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	0.71	0.95	0.96	0.88	0.18	1.06
Jan. 18 - Jan. 31	0.72	0.90	0.98	-	0.18	-
Feb. 1 - Feb. 14	0.79	1.00	0.99	1.00	0.18	1.18
Feb. 15 - Feb. 28	0.90	1.15	1.06	1.15	0.18	1.33
Mar. 1 - Mar. 14	0.75	0.95	0.97	0.95	0.18	1.13
Mar. 15 - Mar. 30	0.89	0.92	0.92	0.92	0.14	1.06
Mar. 31 - Apr. 13	0.89	1.10	1.03	0.98	0.16	1.14
Apr. 14 - Apr. 27	1.07	1.10	1.06	1.22	0.12	1.34
Apr. 28 - May 11	0.83	1.10	1.05	1.15	0.14	1.29
May 12 - May 25	1.23	1.20	1.14	1.25	0.16	1.41
May 26 - June 8	0.85	1.05	1.05	1.45	0.14	1.59
June 9 - June 22	0.76	1.05	0.97	0.90	0.21	1.11
June 23 - July 6	1.01	1.12	1.14	0.88	0.18	1.06
July 7 - July 20	0.60	0.80	0.81	0.88	0.19	1.07
July 21 - Aug. 3	0.78	0.90	0.99	0.64	0.22	0.86
Aug. 4 - Aug. 17	0.80	0.95	0.92	0.77	0.19	0.96
Aug. 18 - Aug. 31	0.87	1.05	1.10	0.69	0.16	0.85
Sept. 1 - Sept. 14	1.08	1.20	1.14	0.92	0.23	1.15
Sept. 15 - Sept. 28	0.88	1.00	0.95	0.40	0.17	0.57
Sept. 29 - Oct. 12	-	-	-	-	-	-
Oct. 13 - Oct. 26	-	-	-	-	-	-
Oct. 27 - Nov. 9	-	-	-	-	-	-
Nov. 10 - Nov. 23	-	-	-	-	-	-
Nov. 24 - Dec. 7	-	-	-	-	-	-
Dec. 8 - Dec. 21	-	-	-	-	-	-
Dec. 22 - Jan. 4/87	-	-	-	-	-	-

Average	0.9	1.0	1.0	1.1	0.18	1.12
Range	0.7 - 1.2	0.8 - 1.2	0.8 - 1.1	0.4 - 2.8		0.6 - 1.6
% Outside Recommended Limits	80%					
No. of Samples	20	19	19	18		18

Manitoba

Health Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Gary Nanna
Resident Administrator
P.O. Box 100
Gillam, Manitoba
ROB OLO

Dear Sir:

RE: 1986 FLUORIDE CONTROL DATA FOR GILLAM

Attached, for review by your Mayor and Council is a data sheet summarizing the 1986 fluoride program for the Town of Gillam.

15 of the required 21 composite samples were submitted. All contained fluoride in concentrations within the acceptable range of 1.0 to 1.4 mg/l. This represnets an improvement over 1985, when only 6 of 26 required samples were submitted.

The fluoride system was shut down on September 15 and replaced with a new system on November 24. As a result there were no samples taken during this period.

No operator analyses were done on the composite samples for comparison to lab readings.

Since the installation of the new fluoride feed system, the fluoride levels in the treated water have been more consistent, and it is our impression that the Water Works Superintendent, Mr. Rudy Gaider, will continue his endeavour to provide proper fluoride levels for the L.G.D. of Gillam.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Rudy Gaider

FLUORIDATION CONTROL RECORD

LOCATION: GILLAM
CHEMICAL: 4% NaF
TEST KIT: Hach Spectrophotometer

FLUORIDATOR :
OPERATOR: Rudy Gaider
TELEPHONE: Shop: 652-2629
Plant: 652-2377

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.21	-	1.16	1.04	-	-
Jan. 18 - Jan. 31	1.40	-	1.16	1.14	-	-
Feb. 1 - Feb. 14	1.25	-	1.21	2.36	-	-
Feb. 15 - Feb. 28	1.25	-	1.21	1.05	-	-
Mar. 1 - Mar. 14	1.20	-	1.21	0.79	-	-
Mar. 15 - Mar. 30	-	-	-	-	-	-
Mar. 31 - Apr. 13	-	-	-	-	-	-
Apr. 14 - Apr. 27	1.13	-	1.19	1.63	-	-
Apr. 28 - May 11	1.14	-	1.18	0.54	-	-
May 12 - May 25	1.00	-	1.17	0.61	-	-
May 26 - June 8	-	-	-	-	-	-
June 9 - June 22	1.00	-	1.18	0.89	-	-
June 23 - July 6	1.18	-	1.16	0.86	-	-
July 7 - July 20	-	-	1.20	0.73	-	-
July 21 - Aug. 3	-	-	-	-	-	-
Aug. 4 - Aug. 17	1.35	-	1.20	0.68	-	-
Aug. 18 - Aug. 31	1.03	-	1.21	0.71	-	-
Sept. 1 - Sept. 14	0.98	-	1.20	0.54	-	-
Sept. 15 - Sept. 28	-	↑	-	-	-	-
Sept. 29 - Oct. 12	-		-	-	-	-
Oct. 13 - Oct. 26	-	SYSTEM DOWN	-	-	-	-
Oct. 27 - Nov. 9	-		-	-	-	-
Nov. 10 - Nov. 23	-	↓	-	-	-	-
Nov. 24 - Dec. 7	1.23	-	1.23	0.60	-	-
Dec. 8 - Dec. 21	-	-	1.12	0.40	-	-
Dec. 22 - Jan. 4/87	1.07	-	1.15	0.30	-	-

Average	1.2	-	1.2	0.9		-
Range	1.0 - 1.4	-	1.1 - 1.2	0.3 - 2.4		-
% Outside Recommended Limits	0%					
No. of Samples	15	-	17	16		-

Manitoba

Health | Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mrs. Doris Lloyd
Secretary - Treasurer
Town of Gimli
P.O. Box 88
Gimli, Manitoba
ROC 1B0

Dear Madame:

RE: 1986 FLUORIDE CONTROL DATA FOR GIMLI

Attached, for review by your Mayor and Council is a data sheet summarizing the 1986 fluoride program for the town of Gimli.

All of the required 26 bi-weekly composite samples were submitted. All contained fluoride in concentrations within the acceptable range of 1.0 to 1.4 mg/l.

The performance of Mr. Albert Markusson, the Water Treatment Plant Operator, has once again been exemplary.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/la
attach.
c.c. Mr. Albert Markusson

FLUORIDATION CONTROL RECORD

LOCATION: GIMLI (Town)
FLUORIDATOR : W&T A-745
CHEMICAL: NaF 3%
OPERATOR: Albert Markusson
TEST KIT: Hach PH/Fluoride Meter (Probe)
TELEPHONE: Plant: 642-7443 Off: 642-5210

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.04	1.05	1.03	0.61	0.45	1.06
Jan. 18 - Jan. 31	1.13	1.05	1.04	0.64	0.45	1.09
Feb. 1 - Feb. 14	1.08	1.05	1.05	0.74	0.45	1.19
Feb. 15 - Feb. 28	1.10	1.05	1.03	0.65	0.45	1.10
Mar. 1 - Mar. 14	1.08	1.10	1.10	0.67	0.45	1.12
Mar. 15 - Mar. 30	1.19	1.10	1.10	0.64	0.45	1.09
Mar. 31 - Apr. 13	1.07	1.10	1.10	0.64	0.45	1.09
Apr. 14 - Apr. 27	1.18	1.10	1.10	0.71	0.45	1.16
Apr. 28 - May 11	1.15	1.15	1.13	0.63	0.45	1.09
May 12 - May 25	1.14	1.10	1.10	0.55	0.45	1.00
May 26 - June 8	1.07	1.05	1.04	0.56	0.45	1.01
June 9 - June 22	1.08	1.05	1.03	0.57	0.45	1.02
June 23 - July 6	1.14	1.05	1.02	0.53	0.45	0.98
July 7 - July 20	1.07	1.00	1.01	0.48	0.45	0.93
July 21 - Aug. 3	1.00	1.05	1.03	-	0.45	-
Aug. 4 - Aug. 17	1.12	1.05	1.03	0.62	0.45	1.07
Aug. 18 - Aug. 31	1.09	1.05	1.03	0.63	0.45	1.08
Sept. 1 - Sept. 14	1.00	1.05	1.04	0.56	0.45	1.01
Sept. 15 - Sept. 28	1.12	1.05	1.04	0.67	0.45	1.12
Sept. 29 - Oct. 12	0.98	1.00	1.00	0.60	0.45	1.05
Oct. 13 - Oct. 26	1.10	1.00	1.00	0.59	0.45	1.04
Oct. 27 - Nov. 9	1.00	1.00	1.00	0.57	0.45	1.02
Nov. 10 - Nov. 23	0.97	1.05	1.02	0.57	0.45	1.02
Nov. 24 - Dec. 7	1.05	1.05	0.99	0.58	0.45	1.03
Dec. 8 - Dec. 21	1.00	1.00	1.00	0.55	0.45	1.00
Dec. 22 - Jan. 4/87	1.15	1.02	0.95	0.68	0.45	1.13

Average	1.1	1.1	1.0	0.6		1.0
Range	1.0 - 1.2	1.0 - 1.2	1.0 - 1.1	0.5 - 0.7		0.9 - 1.2
% Outside Recommended Limits	0%					
No. of Samples	26	26	26	25		25

Manitoba

Health Dental Health

3rd Floor
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Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mrs. Helen Tefs
Secretary - Treasurer
Town of Gladstone
P.O. Box 25
Gladstone, Manitoba
R0J 0T0

Dear Madame:

RE: 1986 FLUORIDATION CONTROL DATA FOR GLADSTONE

Attached, for review by your Mayor and Council is a data sheet summarizing the 1986 fluoride program for the Town of Gladstone.

All of the required 26 bi-weekly composite samples were submitted. Of these, 2, or 8% contained fluoride in concentrations outside the acceptable range of 1.0 to 1.4 mg/l.

Mr. John Waldner, the water treatment plant operator, has done a very good job of maintaining and operating the fluoride system for the Town of Gladstone.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. John Waldner

FLUORIDATION CONTROL RECORD

LOCATION: GLADSTONE
CHEMICAL: NaF 4%
TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W&T A-745 Ser# LDP3692
OPERATOR: Lorne Kennedy John Waldner
TELEPHONE: Plant: 385-2017

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.16	1.10	0.92	1.19	0.22	1.41
Jan. 18 - Jan. 31	1.03	1.10	0.89	0.49	0.22	0.71
Feb. 1 - Feb. 14	1.15	1.00	0.92	0.50	0.22	0.72
Feb. 15 - Feb. 28	1.10	0.95	0.93	0.47	0.22	0.69
Mar. 1 - Mar. 14	1.05	1.10	0.90	0.95	0.22	1.17
Mar. 15 - Mar. 30	1.09	1.00	0.92	1.41	0.22	1.63
Mar. 31 - Apr. 13	1.18	1.03	0.92	0.64	0.22	0.86
Apr. 14 - Apr. 27	1.25	1.17	0.96	0.76	0.22	0.98
Apr. 28 - May 11	1.15	1.10	0.94	0.68	0.22	0.90
May 12 - May 25	1.12	1.10	0.90	1.15	0.22	1.37
May 26 - June 8	1.23	1.10	0.96	1.06	0.22	1.28
June 9 - June 22	1.09	1.20	0.95	0.57	0.22	0.79
June 23 - July 6	0.97	1.50	0.91	0.55	0.22	0.77
July 7 - July 20	1.07	1.10	0.91	0.55	0.22	0.77
July 21 - Aug. 3	1.07	1.08	0.91	0.64	0.22	0.86
Aug. 4 - Aug. 17	0.78	0.83	0.84	1.29	0.22	1.51
Aug. 18 - Aug. 31	1.07	1.10	0.90	1.02	0.22	1.24
Sept. 1 - Sept. 14	1.25	1.10	0.93	0.72	0.22	0.94
Sept. 15 - Sept. 28	1.50	1.16	0.98	0.88	0.22	1.10
Sept. 29 - Oct. 12	1.15	0.99	0.94	0.66	0.22	0.88
Oct. 13 - Oct. 26	1.00	1.00	0.91	0.69	0.22	0.91
Oct. 27 - Nov. 9	1.05	1.10	0.91	0.81	0.22	1.03
Nov. 10 - Nov. 23	1.06	1.11	0.93	0.44	0.22	0.66
Nov. 24 - Dec. 7	1.00	1.10	0.93	0.44	0.22	0.66
Dec. 8 - Dec. 21	1.15	1.02	0.91	0.54	0.22	0.76
Dec. 22 - Jan. 4/87	1.15	1.02	0.93	0.53	0.22	0.75

Average	1.1	1.1	0.9	0.8		1.0
Range	0.8 - 1.5	0.8 - 1.5	0.8 - 1.0	0.5 - 1.4		0.7 - 1.6
% Outside Recommended Limits	8%					
No. of Samples	26	26	26	26		26

Manitoba

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Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Eleanor Gloor
Secretary - Treasurer
Town of Hartney
P.O. Box 337
Hartney, Manitoba
ROM OXO

Dear Madame:

RE: 1986 FLUORIDATION CONTROL DATA FOR HARTNEY

Attached, for review by your Mayor and Council is a data sheet summarizing the 1986 fluoride program for the Town of Hartney.

All of the required 26 bi-weekly composite samples were submitted. Of these, 1, or 4% contained fluoridation concentrations outside the acceptable range of 1.0 to 1.4 mg/l. (During this period a problem with the feeder was reported).

Mr. Bill Mycnasiw, the Water Treatment Plant Operator, has done a very good job of maintaining and operating the fluoride equipment for Hartney.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Bill Mychasiw

FLUORIDATION CONTROL RECORD

LOCATION: HARTNEY

CHEMICAL: NaF 1%

TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W&T A-745

OPERATOR: Bill Mychasiw

TELEPHONE: Shop: 858-2076 Off: 858-2429

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	0.99	1.12	1.11	0.99	0.20	1.19
Jan. 18 - Jan. 31	0.97	1.08	1.09	1.50	0.20	1.70
Feb. 1 - Feb. 14	1.15	1.05	1.09	1.68	0.20	1.88
Feb. 15 - Feb. 28	1.20	1.15	1.14	0.89	0.20	1.09
Mar. 1 - Mar. 14	1.17	1.16	1.17	1.20	0.20	1.40
Mar. 15 - Mar. 30	0.95	1.02	1.09	1.04	0.20	1.24
Mar. 31 - Apr. 13	1.18	1.15	1.13	1.14	0.20	1.34
Apr. 14 - Apr. 27	1.30	1.22	1.20	1.20	0.20	1.40
Apr. 28 - May 11	1.18	1.18	1.19	0.99	0.20	1.19
May 12 - May 25	1.25	1.22	1.20	1.24	0.20	1.44
May 26 - June 8	0.83	1.00	1.14	0.84	0.20	1.04
June 9 - June 22	1.15	1.18	1.13	1.09	0.20	1.29
June 23 - July 6	1.13	1.18	1.19	1.20	0.20	1.40
July 7 - July 20	1.30	1.15	1.18	1.36	0.20	1.56
July 21 - Aug. 3	1.20	1.18	1.17	0.95	0.20	1.15
Aug. 4 - Aug. 17	1.27	1.18	1.17	1.17	0.20	1.37
Aug. 18 - Aug. 31	1.30	1.25	1.21	-	0.20	-
Sept. 1 - Sept. 14	1.45	1.25	1.25	1.12	0.20	1.32
Sept. 15 - Sept. 28	1.34	1.20	1.23	1.05	0.20	1.25
Sept. 29 - Oct. 12	0.98	1.10	1.10	1.00	0.20	1.20
Oct. 13 - Oct. 26	1.04	1.16	1.16	1.10	0.20	1.30
Oct. 27 - Nov. 9	1.13	1.18	1.17	0.88	0.20	1.08
Nov. 10 - Nov. 23	1.05	1.10	1.09	1.10	0.20	1.30
Nov. 24 - Dec. 7	1.24	1.18	1.09	1.06	0.20	1.26
Dec. 8 - Dec. 21	1.15	1.18	1.17	1.08	0.20	1.28
Dec. 22 - Jan. 4/87	1.00	1.12	1.13	0.92	0.20	1.12

Average	1.2	1.2	1.2	1.2		1.3
Range	0.8 - 1.5	1.0 - 1.3	1.1 - 1.3	0.9 - 1.7		1.1 - 1.9
% Outside Recommended Limits	4%					
No. of Samples	26	26	26	25		25

Manitoba

Health Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Dennis Higginson
Secretary - Treasurer
Town of Killarney
P.O. Box 10
Killarney, Manitoba
ROK 1GO

Dear Sir:

RE: 1986 FLUORIDATION CONTROL DATA FOR KILLARNEY

Attached, for review by your Mayor and Council, is a data sheet summarizing the 1986 fluoride program for the Town of Killarney.

All of the required 26 bi-weekly samples were submitted. Of these, 10, or 38% contained fluoride in concentrations outside the acceptable range of 1.0 to 1.4 mg/l.

As previously mentioned, a change in the fluoride addition point by your operator Mr. Carl Parker, has resulted in much more consistent fluoride levels in your Town's water supply since September, 1986.

The repair of your fluoride test kit has further improved the fluoride levels.

Mr. Parker has done a good job of operating the fluoridation equipment for the Town of Killarney.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Carl Parker

FLUORIDATION CONTROL RECORD

LOCATION: KILLARNEY
FLUORIDATOR : W&T A-747
CHEMICAL: NaF 4%
OPERATOR: Carl Parker
TEST KIT: Hach Spectrophotometer
TELEPHONE: Plant: 523-8944

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.53	-	1.14	2.05	0.19	2 24
Jan. 18 - Jan. 31	1.48	1.20	1.12	2.12	0.19	2.31
Feb. 1 - Feb. 14	1.57	1.30	1.31	1.47	0.19	1.66
Feb. 15 - Feb. 28	1.15	1.25	1.23	2.26	0.19	2.45
Mar. 1 - Mar. 14	1.15	2.00	1.17	1.33	0.19	1.52
Mar. 15 - Mar. 30	0.78	1.00	1.06	0.91	0.19	1.10
Mar. 31 - Apr. 13	1.05	1.10	1.14	1.00	0.19	1.19
Apr. 14 - Apr. 27	0.96	-	1.08	1.33	0.19	1.52
Apr. 28 - May 11	0.57	0.80	0.87	0.97	0.19	1.16
May 12 - May 25	1.09	1.20	1.12	1.05	0.19	1.24
May 26 - June 8	1.00	1.15	1.11	0.89	0.19	1.08
June 9 - June 22	0.88	1.00	1.06	1.04	0.19	1.23
June 23 - July 6	0.91	1.20	1.06	0.82	0.19	1.01
July 7 - July 20	0.96	1.20	1.16	1.02	0.19	1.21
July 21 - Aug. 3	0.45	1.00	1.06	1.51	0.19	1.70
Aug. 4 - Aug. 17	1.35	1.25	1.29	0.93	0.19	1.12
Aug. 18 - Aug. 31	1.55	1.20	1.29	1.59	0.19	1.78
Sept. 1 - Sept. 14	1.25	1.20	1.11	1.10	0.19	1.29
Sept. 15 - Sept. 28	1.04	1.02	1.07	0.94	0.19	1.13
Sept. 29 - Oct. 12	1.40	1.20	1.26	1.09	0.19	1.28
Oct. 13 - Oct. 26	1.03	1.10	1.09	1.27	0.19	1.46
Oct. 27 - Nov. 9	1.35	1.30	1.20	1.23	0.19	1.42
Nov. 10 - Nov. 23	1.14	1.25	1.16	1.31	0.19	1.50
Nov. 24 - Dec. 7	1.23	1.25	1.20	0.97	0.19	1.16
Dec. 8 - Dec. 21	1.22	1.25	1.25	0.82	0.19	1.01
Dec. 22 - Jan. 4/87	0.77	1.20	1.27	0.54	0.19	0.73

Average	1.1	1.2	1.2	1.2		1.4
Range	0.5 - 1.6	0.8 - 2.0	0.9 - 1.3	0.5 - 2.3		0.7 - 2.5
% Outside Recommended Limits	38%					
No. of Samples	26	24	26	26		26

Manitoba

Health Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Richard C. Locke
Secretary - Treasurer
Village of MacGregor
P.O. Box 190
MacGregor, Manitoba
ROH ORO

Dear Sir:

RE: 1986 FLUORIDATION CONTROL DATA FOR MACGREGOR

Attached, for review by your Mayor and Council, is a data sheet summarizing the 1986 fluoride program for the Village of MacGregor.

All of the required 26 bi-weekly samples were submitted. Of these, 2, or 8% contained fluoride in concentrations outside the acceptable range of 1.0 to 1.4 mg/l.

This data indicates that Mr. Brian Telford, your Water Treatment Plant Operator, has done an excellent job of operating and monitoring the fluoridation equipment for the Village of MacGregor.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Brian Telford

FLUORIDATION CONTROL RECORD

LOCATION: MACGREGOR
CHEMICAL: NaF 3%
TEST KIT: Hach DR/3 Spectrophotometer

FLUORIDATOR : W&T A-745
OPERATOR: Brian Telford
TELEPHONE: Office: 685-2211

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.22	1.10	1.14	0.85	0.19	1.04
Jan. 18 - Jan. 31	1.13	1.09	1.10	0.76	0.19	0.95
Feb. 1 - Feb. 14	1.25	1.08	1.08	0.82	0.19	1.01
Feb. 15 - Feb. 28	1.34	1.07	1.08	0.81	0.19	1.00
Mar. 1 - Mar. 14	1.23	1.15	1.02	0.79	0.19	0.98
Mar. 15 - Mar. 30	1.09	1.04	1.04	0.99	0.19	1.18
Mar. 31 - Apr. 13	1.24	1.10	1.12	0.99	0.19	1.18
Apr. 14 - Apr. 27	1.50	1.17	1.11	0.97	0.19	1.16
Apr. 28 - May 11	1.55	1.20	1.18	0.98	0.19	1.17
May 12 - May 25	1.18	1.05	1.13	0.81	0.19	1.00
May 26 - June 8	1.10	1.01	0.99	0.73	0.19	0.82
June 9 - June 22	1.22	1.00	1.05	0.72	0.19	0.91
June 23 - July 6	1.10	0.99	1.00	0.84	0.19	1.03
July 7 - July 20	1.35	1.07	1.07	0.86	0.19	1.05
July 21 - Aug. 3	1.25	1.02	1.00	0.80	0.19	0.99
Aug. 4 - Aug. 17	1.18	1.05	1.00	0.86	0.19	1.05
Aug. 18 - Aug. 31	1.17	1.00	1.05	0.84	0.19	1.03
Sept. 1 - Sept. 14	1.20	1.05	1.03	0.83	0.19	1.02
Sept. 15 - Sept. 28	1.23	1.00	1.04	0.85	0.19	1.04
Sept. 29 - Oct. 12	1.18	1.00	1.01	0.85	0.19	1.04
Oct. 13 - Oct. 26	1.04	1.00	1.01	0.84	0.19	1.03
Oct. 27 - Nov. 9	1.23	1.04	1.00	0.86	0.19	1.05
Nov. 10 - Nov. 23	1.25	1.00	1.00	0.88	0.19	1.07
Nov. 24 - Dec. 7	1.24	1.01	1.06	0.91	0.19	1.10
Dec. 8 - Dec. 21	1.28	1.00	1.03	0.87	0.19	1.06
Dec. 22 - Jan. 4/87	1.13	0.98	1.00	0.97	0.19	1.16

Average	1.3	1.1	1.1	0.9		1.0
Range	1.0 - 1.6	1.0 - 1.2	1.0 - 1.2	0.7 - 1.0		0.8 - 1.2
% Outside Recommended Limits	8%					
No. of Samples	26	26	26	26		26

Manitoba

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831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. J.K. Wishart
Secretary - Treasurer
Town of Minnedosa
P.O. Box 426
Minnedosa, Manitoba
ROJ 1E0

Dear Sir:

RE: FLUORIDATION CONTROL DATA FOR MINNEDOSA

Attached, for review by your Mayor and Council, is a data sheet summarizing the 1986 fluoride program for the Town of Minnedosa.

Although your water works staff have been fluoridating the Minnedosa water supply on a continual basis, participation in the sampling program was discontinued but resumed in April, 1986.

From the samples submitted, only 1, or 6% contained fluoride in concentration outside the acceptable range of 1.0 to 1.4 mg/l.

Since there is no fluoridation equipment in the No. 2 plant, there are periods when the fluoride levels of the water supply are below the recommended level.

Your Town Superintendent, Mr. Allan Jamieson has shown concern over this matter and is looking into possible solutions.

Mr. Frank Taylor, Water Treatment Plant Operator has done a good job of operating and maintaining the fluoridation equipment for the Town of Minnedosa.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Allan Jamieson
Mr. Frank Taylor

FLUORIDATION CONTROL RECORD

LOCATION: MINNEDOSA
CHEMICAL: NaF 3%
TEST KIT: Hach Filterphotometer

FLUORIDATOR : W&T A-417
OPERATOR: Frank Taylor
TELEPHONE: Plant: 867-2949
Supt. Allan Jameson

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	-	-	-	-	-	-
Jan. 18 - Jan. 31	-	-	-	-	-	-
Feb. 1 - Feb. 14	-	-	-	-	-	-
Feb. 15 - Feb. 28	-	-	-	-	-	-
Mar. 1 - Mar. 14	-	-	-	-	-	-
Mar. 15 - Mar. 30	-	-	-	-	-	-
Mar. 31 - Apr. 13	-	-	-	-	-	-
Apr. 14 - Apr. 27	-	-	-	-	-	-
Apr. 28 - May 11	1.24	1.35	1.20	0.83	0.28	1.11
May 12 - May 25	1.35	1.35	1.26	0.79	0.28	1.07
May 26 - June 8	1.40	1.35	1.34	0.63	0.28	0.91
June 9 - June 22	1.23	1.15	1.20	0.71	0.28	0.99
June 23 - July 6	-	-	-	-	-	-
July 7 - July 20	-	-	-	-	-	-
July 21 - Aug. 3	1.38	1.25	1.19	1.07	0.28	1.35
Aug. 4 - Aug. 17	1.35	1.10	1.11	1.03	0.28	1.31
Aug. 18 - Aug. 31	1.22	1.40	1.29	0.96	0.28	1.24
Sept. 1 - Sept. 14	1.28	1.25	1.29	0.94	0.28	1.22
Sept. 15 - Sept. 28	1.28	1.30	1.23	0.85	0.28	1.13
Sept. 29 - Oct. 12	1.34	1.40	1.34	0.89	0.28	1.17
Oct. 13 - Oct. 26	1.26	1.25	1.29	1.00	0.28	1.28
Oct. 27 - Nov. 9	1.40	1.35	1.27	0.92	0.28	1.20
Nov. 10 - Nov. 23	1.50	1.40	1.36	0.96	0.28	1.24
Nov. 24 - Dec. 7	1.00	1.15	1.14	0.77	0.28	1.05
Dec. 8 - Dec. 21	1.10	-	1.16	0.88	0.28	1.16
Dec. 22 - Jan. 4/87	1.00	1.35	1.19	0.63	0.28	0.91

Average	1.3	1.3	1.2	0.9		1.2
Range	1.0 - 1.5	1.1 - 1.4	1.1 - 1.3	0.6 - 1.1		0.9 - 1.4
% Outside Recommended Limits	6%					
No. of Samples	16	15	16	16		16

Manitoba

Health | Dental Health

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831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Abe Bergmann
Secretary - Treasurer
Town of Morden
P.O. Box 2440
Morden, Manitoba
ROG 1JO

Dear Sir:

SUBJECT: 1986 FLUORIDE CONTROL DATA FOR MORDEN

Attached, for review by your Mayor and Council, is a data sheet summarizing the 1986 fluoride program for the Town of Morden.

All of the required 26 bi-weekly samples were submitted. Of these, 5, or 19% contained fluoride in concentrations outside the acceptable range.

Mr. Dick Kroeker, your Town Superintendent continues to do a very good job of operating the fluoridating equipment in order to provide proper fluoride level for the Town of Morden.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attacn.
c.c. Mr. Dick Kroeker

FLUORIDATION CONTROL RECORD

LOCATION: MORDEN
CHEMICAL: NaF 4%
TEST KIT: Hach Filterphotometer

FLUORIDATOR : 2 - W&T A-417 Feeders
OPERATOR: Dick Kroeker
TELEPHONE: Plant: 822-5707

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.07	0.85	0.88	1.05	0.32	1.37
Jan. 18 - Jan. 31	1.12	1.02	0.91	1.06	0.32	1.38
Feb. 1 - Feb. 14	1.05	1.10	0.79	1.07	0.32	1.39
Feb. 15 - Feb. 28	0.99	0.65	0.66	1.09	0.32	1.41
Mar. 1 - Mar. 14	1.03	0.95	0.89	1.07	0.32	1.39
Mar. 15 - Mar. 30	0.77	0.70	0.73	0.67	0.32	0.99
Mar. 31 - Apr. 13	0.93	0.80	0.66	0.85	0.32	1.17
Apr. 14 - Apr. 27	1.43	1.10	1.10	1.41	0.32	1.73
Apr. 28 - May 11	1.45	1.20	1.14	1.65	0.32	1.97
May 12 - May 25	1.07	0.85	0.78	1.50	0.30	1.80
May 26 - June 8	0.97	0.80	0.80	1.29	0.32	1.61
June 9 - June 22	1.09	0.90	0.88	1.20	0.32	1.52
June 23 - July 6	1.13	0.95	1.08	1.28	0.32	1.60
July 7 - July 20	1.35	1.00	1.19	1.56	0.32	1.88
July 21 - Aug. 3	1.25	1.10	1.04	1.32	0.32	1.64
Aug. 4 - Aug. 17	1.18	0.80	0.99	1.15	0.32	1.47
Aug. 18 - Aug. 31	1.13	1.00	1.08	1.09	0.32	1.41
Sept. 1 - Sept. 14	1.09	0.90	0.98	1.10	0.32	1.42
Sept. 15 - Sept. 28	1.08	0.80	0.82	-	-	-
Sept. 29 - Oct. 12	0.90	0.60	0.69	-	-	-
Oct. 13 - Oct. 26	0.90	1.00	0.91	0.72	0.32	1.04
Oct. 27 - Nov. 9	1.00	1.00	0.99	0.98	0.32	1.30
Nov. 10 - Nov. 23	1.18	1.00	1.05	1.06	0.32	1.38
Nov. 24 - Dec. 7	1.30	1.10	1.16	1.99	0.32	2.31
Dec. 8 - Dec. 21	1.65	1.30	1.42	1.38	0.32	1.70
Dec. 22 - Jan. 4/87	1.23	1.05	1.15	0.99	0.32	1.31

Average	1.1	0.9	1.0	1.2		1.5
Range	0.9 - 1.4	0.6 - 1.3	0.7 - 1.4	0.7 - 2.0		1.0 - 2.3
% Outside Recommended Limits	19%					
No. of Samples	26	26	26	24		24

Manitoba

Health Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Dale Lyle
Secretary - Treasurer
Town of Neepawa
P.O. Box 339
Neepawa, Manitoba
ROJ 1HO

Dear Sir:

RE: 1986 FLUORIDATION CONTROL DATA FOR NEEPAWA

Attached, for review by your Mayor and Council, is a data sheet summarizing the 1986 fluoride program or the Town of Neepawa.

All of the required 26 bi-weekly samples were submitted. Of these, only 1, or 4% contained fluoride in concentrations outside the acceptable range of 1.0 to 1.4 mg/l.

Mr. George Squires, the Water Works Supervisor, and his staff have done a very good job of maintaining the correct fluoride level in the Neepawa water supply.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. George Squires

FLUORIDATION CONTROL RECORD

LOCATION: NEEPAWA
FLUORIDATOR : W&T A-690 Ser# 3811
CHEMICAL: Na2Sif6 (DRY)
OPERATOR: Richard Chorneyko - Town Supt.
TEST KIT: Hach Spectrophotometer
TELEPHONE: George Squires-Plant-476-5331

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.07	1.20	1.21	0.98	0.27	1.25
Jan. 18 - Jan. 31	1.03	1.10	1.11	0.94	0.27	1.21
Feb. 1 - Feb. 14	1.10	1.20	1.13	0.95	0.27	1.22
Feb. 15 - Feb. 28	1.10	1.20	1.21	1.00	0.27	1.27
Mar. 1 - Mar. 14	1.05	1.10	1.14	0.92	0.27	1.19
Mar. 15 - Mar. 30	1.12	1.10	1.20	1.13	0.30	1.43
Mar. 31 - Apr. 13	1.15	1.10	1.14	0.94	0.29	1.23
Apr. 14 - Apr. 27	1.03	1.10	1.14	0.88	0.28	1.16
Apr. 28 - May 11	0.93	1.10	1.09	0.80	0.20	1.00
May 12 - May 25	1.09	1.10	1.14	1.12	0.22	1.34
May 26 - June 8	1.32	1.21	1.21	1.10	0.23	1.33
June 9 - June 22	1.15	1.10	1.13	1.11	0.25	1.36
June 23 - July 6	1.34	1.20	1.18	1.44	0.25	1.69
July 7 - July 20	1.30	1.10	1.14	1.28	0.24	1.52
July 21 - Aug. 3	1.40	1.20	1.22	1.25	0.21	1.46
Aug. 4 - Aug. 17	1.32	1.20	1.16	1.23	0.24	1.47
Aug. 18 - Aug. 31	1.40	1.00	1.21	1.49	0.25	1.74
Sept. 1 - Sept. 14	1.25	1.20	1.19	1.20	0.26	1.46
Sept. 15 - Sept. 28	1.13	1.12	1.09	1.05	0.23	1.28
Sept. 29 - Oct. 12	1.17	1.20	1.19	1.13	0.35	1.48
Oct. 13 - Oct. 26	1.30	1.20	1.23	1.28	0.23	1.51
Oct. 27 - Nov. 9	1.35	1.10	1.20	1.26	0.24	1.50
Nov. 10 - Nov. 23	1.43	1.20	1.25	1.12	0.26	1.38
Nov. 24 - Dec. 7	1.12	1.20	1.19	1.03	0.46	1.49
Dec. 8 - Dec. 21	1.10	1.10	1.10	0.97	0.35	1.32
Dec. 22 - Jan. 4/87	1.13	1.10	1.15	1.06	0.27	1.33

Average	1.2	1.1	1.2	1.1		1.4
Range	0.8 - 1.4	1.0 - 1.2	1.1 - 1.3	0.9 - 1.5		1.0 - 1.7
% Outside Recommended Limits	4%					
No. of Samples	26	26	26	26		26

Manitoba

Health Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. R.A. Dale
Resident Administrator
L.G.D. of Pinawa
P.O. Box 100
Pinawa, Manitoba
ROE 1LO

Dear Sir:

RE: 1986 FLUORIDE CONTROL DATA FOR PINAWA

Attached, for review by your Mayor and Council, is a data sheet summarizing the 1986 fluoride program for the Town of Pinawa.

All of the required 26 bi-weekly samples were submitted. Many of these were below the required minimum dosage of 1.0 mg/l at the beginning of the year, however, it is my impression that your water plant operator, Mr. Ron McDowell was unaware that the minumum level has been changed from 0.8 mg/l to 1.0 mg/l.

In general, Mr. McDowell has done a very good job of operating and maintaining the fluoridation equipment for the Town of Pinawa.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attacn.
c.c. Mr. Ron McDowell

FLUORIDATION CONTROL RECORD

LOCATION: PINAWA
CHEMICAL: Na2SiDry
TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W&T A-690 Ser# LD3829
OPERATOR: Ron McDowall
TELEPHONE: Plant: 753-2542

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	0.98	0.93	0.95	0.70	0.08	0.78
Jan. 18 - Jan. 31	0.78	1.03	1.02	0.71	0.08	0.79
Feb. 1 - Feb. 14	1.00	1.02	1.07	0.98	0.08	1.06
Feb. 15 - Feb. 28	0.80	0.98	0.99	0.67	0.08	0.75
Mar. 1 - Mar. 14	0.84	0.95	0.97	0.71	0.08	0.79
Mar. 15 - Mar. 30	0.88	1.02	1.04	0.93	0.08	1.01
Mar. 31 - Apr. 13	0.92	1.02	1.05	1.04	0.08	1.12
Apr. 14 - Apr. 27	1.06	1.02	1.03	0.89	0.08	0.97
Apr. 28 - May 11	1.10	1.10	1.11	0.92	0.08	1.00
May 12 - May 25	1.09	1.06	1.08	0.77	0.08	0.85
May 26 - June 8	0.83	0.96	0.97	0.53	0.08	0.61
June 9 - June 22	1.05	1.02	1.09	0.76	0.08	0.84
June 23 - July 6	0.91	0.98	0.99	0.73	0.08	0.81
July 7 - July 20	1.24	1.05	1.06	0.79	0.08	0.87
July 21 - Aug. 3	0.93	1.12	1.11	0.73	0.08	0.81
Aug. 4 - Aug. 17	0.73	1.02	0.99	0.69	0.08	0.77
Aug. 18 - Aug. 31	0.90	1.04	1.08	0.67	0.08	0.75
Sept. 1 - Sept. 14	1.17	1.05	1.07	0.77	0.08	0.85
Sept. 15 - Sept. 28	1.08	1.02	1.05	0.80	0.08	0.88
Sept. 29 - Oct. 12	0.77	1.05	1.09	0.72	0.08	0.80
Oct. 13 - Oct. 26	0.90	1.02	1.05	0.81	0.08	0.89
Oct. 27 - Nov. 9	1.05	1.05	1.09	0.88	0.08	0.96
Nov. 10 - Nov. 23	1.26	1.15	1.15	0.85	0.08	0.93
Nov. 24 - Dec. 7	1.35	1.10	1.10	0.96	0.08	1.04
Dec. 8 - Dec. 21	1.07	1.00	1.00	0.78	0.08	0.86
Dec. 22 - Jan. 4/87	1.15	1.02	1.01	0.78	0.08	0.86

Average	1.0	1.0	1.1	0.8		0.9
Range	0.8 - 1.4	0.9 - 1.2	1.0 - 1.1	0.5 - 1.0		0.6 - 1.1
% Outside Recommended Limits	46%					
No. of Samples	26	26	26	26		26

Manitoba

Health Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Wayne R. Woodman
Secretary - Treasurer
City of Portage La Prairie
P.O. Box 490
Portage La Prairie, Manitoba
R1N 2B2

Dear Sir:

RE: 1986 FLUORIDE CONTROL DATA FOR PORTAGE LA PRAIRIE

Attached, for review by you Mayor and Council, is a data sheet summarizing the 1986 fluoride program for the City of Portage La Prairie.

All of the required 26 bi-weekly samples were submitted. All contained fluoride in concentrations within the correct range of 1.0 to 1.4 mg/l.

Mr. Dave Pirt, Water Works Superintendent has done an excellent job of maintaining the correct fluoride level in the City of Portage La Prairie water supply.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Dave Pirt

FLUORIDATION CONTROL RECORD

LOCATION: PORTAGE LA PRAIRIE
FLUORIDATOR : W&T A-690 Ser# LDF 20089
CHEMICAL: Na2Sif6 (DRY)
OPERATOR: Dave Pirt
TEST KIT: Specific Ion Electrode
TELEPHONE: Plant: 857-9781

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THECRETICAL CONTENT
Jan. 4 - Jan. 17/86	1.25	1.31	1.34	0.87	0.20	1.07
Jan. 18 - Jan. 31	1.18	1.29	1.28	0.79	0.20	0.99
Feb. 1 - Feb. 14	1.22	1.33	1.27	0.80	0.20	1.00
Feb. 15 - Feb. 28	1.15	1.30	1.20	0.91	0.20	1.11
Mar. 1 - Mar. 14	1.23	1.30	1.20	0.88	0.20	1.08
Mar. 15 - Mar. 30	1.35	1.55	1.37	1.03	0.20	1.23
Mar. 31 - Apr. 13	1.13	1.10	1.34	0.85	0.20	1.05
Apr. 14 - Apr. 27	1.10	1.27	1.34	0.82	0.20	1.02
Apr. 28 - May 11	1.05	1.15	1.17	0.89	0.20	1.09
May 12 - May 25	1.17	1.15	1.19	0.95	0.20	1.15
May 26 - June 8	1.18	1.22	1.23	0.95	0.20	1.15
June 9 - June 22	1.22	1.25	1.24	1.11	0.20	1.31
June 23 - July 6	1.06	1.10	1.11	0.96	0.20	1.16
July 7 - July 20	1.35	1.40	1.28	1.18	0.20	1.38
July 21 - Aug. 3	1.28	1.35	1.27	1.10	0.20	1.30
Aug. 4 - Aug. 17	1.24	1.30	1.23	1.07	0.20	1.27
Aug. 18 - Aug. 31	1.27	1.20	1.26	1.00	0.20	1.20
Sept. 1 - Sept. 14	1.25	1.28	1.18	1.02	0.20	1.22
Sept. 15 - Sept. 28	1.15	1.19	1.11	0.92	0.20	1.12
Sept. 29 - Oct. 12	1.18	1.19	1.16	0.91	0.20	1.11
Oct. 13 - Oct. 26	1.15	1.21	1.20	0.93	0.20	1.13
Oct. 27 - Nov. 9	1.12	1.16	1.16	0.88	0.20	1.08
Nov. 10 - Nov. 23	1.18	-	-	-	-	-
Nov. 24 - Dec. 7	1.23	1.30	1.24	1.02	0.20	1.22
Dec. 8 - Dec. 21	1.22	1.25	1.22	0.89	0.20	1.09
Dec. 22 - Jan. 4/87	1.25	1.22	1.23	0.94	0.20	1.14

Average	1.2	1.3	1.2	1.0		1.2
Range	1.1 - 1.4	1.1 - 1.6	1.1 - 1.4	0.8 - 1.2		1.0 - 1.4
% Outside Recommended Limits	0%					
No. of Samples	26	25	25	25		25

Manitoba

Health Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Jennie Kozak
Secretary - Treasurer
Town of Rivers
P.O. Box 520
Rivers, Manitoba
ROK 1XO

Dear Madame:

RE: 1986 FLUORIDE CONTROL DATA FOR RIVERS

Attached, for review by your Mayor and Council, is a data sheet summarizing the 1986 fluoride program for the Town of Rivers.

All of the five required bi-weekly samples were submitted. The fluoride levels in these samples were lower than the required minimum of 1.0 mg/l. Mr. Jeff Worth, Town Foreman has shown concern over this and has been in contact with me on this matter. The system was shut down for repair from January 1, 1986 to October 26, 1986.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Jeff Worth

FLUORIDATION CONTROL RECORD

LOCATION: RIVERS
CHEMICAL: 4% Na F
TEST KIT: HACK DR-2

FLUORIDATOR : L.M.I. SATURATOR
OPERATOR: Jeff Worth
TELEPHONE: Town Office - 328-5250
Water plant - 328-7480 Shop - 328-7862
Natural Content - 0.18

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86						
Jan. 18 - Jan. 31						
Feb. 1 - Feb. 14						
Feb. 15 - Feb. 28						
Mar. 1 - Mar. 14						
Mar. 15 - Mar. 30						
Mar. 31 - Apr. 13						
Apr. 14 - Apr. 27						
Apr. 28 - May 11						
May 12 - May 25						
May 26 - June 8						
June 9 - June 22						
June 23 - July 6						
July 7 - July 20						
July 21 - Aug. 3						
Aug. 4 - Aug. 17						
Aug. 18 - Aug. 31						
Sept. 1 - Sept. 14						
Sept. 15 - Sept. 28						
Sept. 29 - Oct. 12						
Oct. 13 - Oct. 26						
Oct. 27 - Nov. 9	0.97	1.05	1.00	1.67	0.18	1.85
Nov. 10 - Nov. 23	0.80	0.85	0.91			
Nov. 24 - Dec. 7	0.46	0.80	0.78	2.54	0.18	2.72
Dec. 8 - Dec. 21	0.90	0.80	0.96	0.27	0.18	0.45
Dec. 22 - Jan. 4/87	0.77	0.90	0.88	0.87	0.18	1.05

Average	0.78	0.88	0.91	1.34		1.52
Range	0.5 - 1.0	0.8 - 1.1	0.8 - 1.0	0.3 - 1.7		0.5 - 2.7
% Outside Recommended Limits	80%					
No. of Samples	5	5	5	4	4	4

Manitoba

Health | Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Douglas Frost Hunt
Secretary - Treasurer
Town of Roblin
P.O. Box 730
Roblin, Manitoba
ROL 1P0

Dear Sir:

RE: 1986 FLUORIDE CONTROL DATA FOR ROBLIN

Attached, for review by your Mayor and Council, is a date sheet summarizing the 1986 fluoride program for the Town of Roblin.

All of the required 26 bi-weekly samples were submitted. Only two contained fluoride in concentration outside the acceptable range of 1.0 to 1.4 mg/l.

Mr. Holopina, your Water Treatement Plant Operator continues to do a very good job of maintaining the correct fluoride level in the water supply for the Town of Roblin.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Art Currie/Mr. Nick Holopina

FLUORIDATION CONTROL RECORD

LOCATION: ROBLIN
CHEMICAL: NaF 4%
TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W&T A-745 Ser# LDP 313
OPERATOR: Art Currey / Nick Holopina
TELEPHONE: Plant: 937-2377

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.08	1.10	1.11	0.71	0.26	0.97
Jan. 18 - Jan. 31	0.95	0.95	0.97	0.93	0.26	1.19
Feb. 1 - Feb. 14	1.00	1.05	1.08	0.69	0.26	0.95
Feb. 15 - Feb. 28	1.15	1.10	1.14	0.78	0.26	1.04
Mar. 1 - Mar. 14	1.17	1.05	1.08	0.72	0.26	0.98
Mar. 15 - Mar. 30	1.14	1.15	1.17	0.97	0.26	1.23
Mar. 31 - Apr. 13	1.18	1.15	1.13	0.81	0.26	1.07
Apr. 14 - Apr. 27	0.88	0.95	1.01	0.72	0.26	0.98
Apr. 28 - May 11	1.01	1.05	1.06	0.65	0.26	0.91
May 12 - May 25	1.05	1.10	1.11	0.85	0.26	1.11
May 26 - June 8	1.06	1.05	1.05	0.80	0.26	1.06
June 9 - June 22	0.96	1.10	1.05	0.83	0.26	1.09
June 23 - July 6	1.15	1.01	1.02	0.79	0.26	1.05
July 7 - July 20	0.91	1.05	1.02	0.86	0.26	1.12
July 21 - Aug. 3	1.05	1.10	1.09	1.09	0.26	1.35
Aug. 4 - Aug. 17	0.95	1.05	1.07	0.87	0.26	1.13
Aug. 18 - Aug. 31	1.04	0.95	1.04	0.88	0.26	1.14
Sept. 1 - Sept. 14	1.10	1.10	1.12	0.82	0.26	1.08
Sept. 15 - Sept. 28	1.17	1.15	1.15	0.98	0.26	1.24
Sept. 29 - Oct. 12	1.13	1.15	1.15	1.00	0.26	1.26
Oct. 13 - Oct. 26	1.05	0.80	0.86	0.92	0.26	1.18
Oct. 27 - Nov. 9	1.23	1.15	1.13	0.93	0.26	1.19
Nov. 10 - Nov. 23	1.26	1.05	1.03	0.95	0.26	1.21
Nov. 24 - Dec. 7	1.17	1.10	1.10	0.95	0.26	1.21
Dec. 8 - Dec. 21	1.22	1.15	1.13	0.89	0.26	1.15
Dec. 22 - Jan. 4/87	1.19	1.15	1.16	1.15	0.26	1.41

Average	1.1	1.1	1.1	0.9		1.1
Range	0.9 - 1.3	0.8 - 1.2	0.9 - 1.2	0.7 - 1.2		0.9 - 1.4
% Outside Recommended Limits	8%					
No. of Samples	26	26	26	26		26

Manitoba

Health | Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Lionel E. Dane
Secretary - Treasurer
Town of Souris
P.O. Box 518
Souris, Manitoba
R0K 2C0

Dear Sir:

RE: 1986 FLUORIDE CONTROL DATA FOR SOURIS

Attached, for review by your Mayor and Council, is a data sheet summarizing the 1986 fluoride program for the Town of Souris.

All of the required 26 bi-weekly samples were submitted. All contained fluoride in concentrations within the acceptable range of 1.0 to 1.4 mg/l.

The Water Treatment Plant Operator, Mr. Bill Zander, has for the second year in a row, done an excellent job of maintaining proper fluoride levels in the Souris drinking water.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Bill Zander

FLUORIDATION CONTROL RECORD

LOCATION: SOURIS
CHEMICAL: NaF 3%
TEST KIT: Hach Colormeter/PH Meter

FLUORIDATOR : W&T A-747
OPERATOR: Bill Zander
TELEPHONE: Plant: 483-3096

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.12	1.10	1.21	0.81	0.19	1.00
Jan. 18 - Jan. 31	1.12	1.15	1.18	1.23	0.19	1.42
Feb. 1 - Feb. 14	1.15	1.18	1.26	-	-	-
Feb. 15 - Feb. 28	1.20	1.18	1.20	1.31	0.19	1.50
Mar. 1 - Mar. 14	1.18	1.96	1.23	1.16	0.19	1.35
Mar. 15 - Mar. 30	1.13	1.21	1.22	1.07	0.19	1.26
Mar. 31 - Apr. 13	1.08	-	1.16	1.26	0.19	1.45
Apr. 14 - Apr. 27	1.15	1.14	1.24	1.32	0.19	1.51
Apr. 28 - May 11	1.18	1.10	1.26	1.40	0.19	1.59
May 12 - May 25	1.14	1.80	1.24	1.16	0.19	1.35
May 26 - June 8	1.06	1.12	1.17	0.36	0.19	0.55
June 9 - June 22	1.18	1.16	1.17	1.34	0.19	1.53
June 23 - July 6	1.28	1.25	1.22	1.22	0.19	1.41
July 7 - July 20	1.20	1.15	1.22	1.16	0.19	1.35
July 21 - Aug. 3	1.08	1.12	1.22	1.03	0.19	1.22
Aug. 4 - Aug. 17	1.08	1.16	1.36	1.20	0.19	1.39
Aug. 18 - Aug. 31	1.13	1.13	1.19	1.11	0.19	1.30
Sept. 1 - Sept. 14	1.00	1.14	1.10	1.20	0.19	1.39
Sept. 15 - Sept. 28	1.07	1.12	1.14	1.13	0.19	1.32
Sept. 29 - Oct. 12	1.17	1.18	1.22	1.58	0.19	1.77
Oct. 13 - Oct. 26	1.05	1.30	1.22	1.46	0.19	1.65
Oct. 27 - Nov. 9	1.18	1.10	1.28	0.98	0.19	1.17
Nov. 10 - Nov. 23	1.05	1.10	1.17	1.25	0.19	1.44
Nov. 24 - Dec. 7	1.12	1.26	1.19	1.04	0.19	1.23
Dec. 8 - Dec. 21	1.25	1.25	1.25	1.38	0.19	1.57
Dec. 22 - Jan. 4/87	1.05	1.10	1.16	1.20	0.19	1.39

Average	1.1	1.2	1.2	1.2		1.4
Range	1.0 - 1.3	1.1 - 2.0	1.1 - 1.3	0.4 - 1.6		0.6 - 1.8
% Outside Recommended Limits	0%					
No. of Samples	26	25	26	25		25

Manitoba

Health | Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Jack Kehler
Secretary - Treasurer
Town of Steinbach
P.O. Box 1090
Steinbach, Manitoba
R0A 2A0

Dear Sir:

SUBJECT: 1986 FLUORIDE CONTROL DATA FOR STEINBACH

Attached, for review by your Mayor and Council, is a data sheet summarizing the 1986 fluoride program for the Town of Steinbach.

All of the required 26 bi-weekly samples were submitted. All contained fluoride in concentrations within the acceptable range of 1.0 to 1.4 mg/l.

The Water Treatment Plant Operator, Mr. Ross Klassen has, for the second year in a row, done an excellent job of maintaining proper fluoride levels in the Steinbach drinking water.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Ross Klassen

FLUORIDATION CONTROL RECORD

LOCATION: STEINBACH
CHEMICAL: NaF 3%
TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W&T A-747
OPERATOR: Bernie Doerksen - W/WKS Supt.
TELEPHONE: Ross Klassen - Asst. " " "
Office: 326-9877 Ext. 14

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.07	1.07	1.07	0.74	0.39	1.13
Jan. 18 - Jan. 31	1.08	1.10	1.11	0.65	0.39	1.04
Feb. 1 - Feb. 14	1.16	1.10	1.12	0.73	0.39	1.12
Feb. 15 - Feb. 28	1.06	1.10	1.10	0.63	0.39	1.02
Mar. 1 - Mar. 14	1.09	1.06	1.07	0.67	0.39	1.06
Mar. 15 - Mar. 30	1.04	1.07	1.15	0.75	0.39	1.14
Mar. 31 - Apr. 13	1.05	1.04	1.04	0.57	0.39	0.96
Apr. 14 - Apr. 27	1.00	1.03	1.03	0.60	0.39	0.99
Apr. 28 - May 11	1.18	1.14	1.15	0.75	0.39	1.14
May 12 - May 25	1.23	1.19	1.18	0.76	0.39	1.15
May 26 - June 8	1.20	1.19	1.18	0.65	0.39	1.04
June 9 - June 22	1.18	1.24	1.18	0.83	0.39	1.22
June 23 - July 6	1.13	1.15	1.15	0.66	0.39	1.05
July 7 - July 20	1.25	1.16	1.16	0.86	0.39	1.25
July 21 - Aug. 3	1.10	1.19	1.19	0.79	0.39	1.18
Aug. 4 - Aug. 17	1.23	1.19	1.19	0.78	0.39	1.17
Aug. 18 - Aug. 31	1.20	1.19	1.20	0.73	0.39	1.12
Sept. 1 - Sept. 14	1.15	1.14	1.14	0.79	0.39	1.18
Sept. 15 - Sept. 28	1.30	1.20	0.99	0.78	0.39	1.17
Sept. 29 - Oct. 12	1.15	1.15	1.16	0.77	0.39	1.16
Oct. 13 - Oct. 26	1.20	1.19	1.19	0.61	0.39	1.00
Oct. 27 - Nov. 9	1.15	1.10	1.10	0.77	0.39	1.16
Nov. 10 - Nov. 23	1.30	1.18	1.18	0.87	0.39	1.26
Nov. 24 - Dec. 7	1.28	1.20	1.20	0.84	0.39	1.23
Dec. 8 - Dec. 21	1.22	1.20	1.20	0.83	0.39	1.22
Dec. 22 - Jan. 4/87	1.23	1.17	1.17	0.82	0.39	1.21

Average	1.2	1.1	1.1	0.7		1.1
Range	1.0 - 1.3	1.0 - 1.2	1.0 - 1.2	0.6 - 0.9		1.0 - 1.3
% Outside Recommended Limits	0%					
No. of Samples	26	26	26	26		26

Manitoba

Health | Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Harry Showdra
Secretary - Treasurer
Town of Swan River
P.O. Box 879
Swan River, Manitoba
R0L 1Z0

Dear Sir:

SUBJECT: 1986 FLUORIDE CONTROL DATA FOR SWAN RIVER

Attached, for review by your Mayor and Council, is a data sheet summarizing the 1986 fluoride program for the Town of Swan River.

All of the required 26 bi-weekly samples were submitted. Of these, 3, or 12% contained fluoride in concentration outside the acceptable range of 1.0 to 1.4 mg/l. This represents an improvement over 1985 when 5 samples were outside the recommended limits.

Your water treatment plant staff have once again done a good job of maintaining the proper fluoride level in the Swan River drinking water.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Dick Sopotyk
Mr. Larry Lemon/Mr. Mel Phillips

FLUORIDATION CONTROL RECORD

LOCATION: SWAN RIVER

CHEMICAL: NaF 3%

TEST KIT: Hach Spectrophotometer

FLUORIDATOR : W&T 44-222 Ser. #YY06251

OPERATOR: Dick Sopotyk - Town Supt.

TELEPHONE: Off: 734-4586 WTP: 734-4628

Larry Lemon
Mel Phillips WTP Operators

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	0.98	1.00	1.03	0.80	0.18	0.98
Jan. 18 - Jan. 31	1.07	1.20	1.11	0.38	0.18	0.56
Feb. 1 - Feb. 14	1.14	1.10	1.08	1.07	0.18	1.25
Feb. 15 - Feb. 28	0.90	1.00	1.01	1.03	0.18	1.21
Mar. 1 - Mar. 14	1.23	-	1.01	1.40	0.18	1.58
Mar. 15 - Mar. 30	1.05	1.00	1.06	1.14	0.18	1.32
Mar. 31 - Apr. 13	1.00	1.10	1.07	1.15	0.18	1.33
Apr. 14 - Apr. 27	1.06	1.00	0.99	0.35	0.18	0.53
Apr. 28 - May 11	1.00	1.00	1.01	0.39	0.18	0.57
May 12 - May 25	0.97	1.10	1.08	1.00	0.18	1.18
May 26 - June 8	1.32	1.10	0.97	1.01	0.18	1.19
June 9 - June 22	1.04	1.50	1.03	1.09	0.18	1.27
June 23 - July 6	1.30	1.20	1.11	1.15	0.18	1.33
July 7 - July 20	1.35	1.20	1.19	1.15	0.18	1.33
July 21 - Aug. 3	1.08	1.20	1.17	0.84	0.18	1.02
Aug. 4 - Aug. 17	1.38	1.20	1.13	1.35	0.18	1.53
Aug. 18 - Aug. 31	1.00	1.10	0.99	1.24	0.18	1.42
Sept. 1 - Sept. 14	1.20	1.20	1.12	1.18	0.18	1.36
Sept. 15 - Sept. 28	1.23	1.10	1.11	1.07	0.18	1.25
Sept. 29 - Oct. 12	0.92	1.00	1.03	0.67	0.18	0.85
Oct. 13 - Oct. 26	1.08	1.25	1.01	1.07	0.18	1.25
Oct. 27 - Nov. 9	1.09	1.20	1.19	1.81	0.18	1.99
Nov. 10 - Nov. 23	1.10	1.25	1.19	1.45	0.18	1.63
Nov. 24 - Dec. 7	1.15	1.10	1.09	1.44	0.18	1.62
Dec. 8 - Dec. 21	1.10	1.05	1.06	1.20	0.18	1.38
Dec. 22 - Jan. 4/87	1.50	1.25	1.17	1.87	0.18	2.08

Average	1.1	1.1	1.1	1.1		1.2
Range	0.9 - 1.5	1.0 - 1.5	1.0 - 1.2	0.4 - 1.8		0.5 - 2.1
% Outside Recommended Limits	12%					
No. of Samples	26	25	26	26		26

Manitoba

Health | Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. A. Moule
Municipal Administrator
Town of The Pas
P.O. Box 870
The Pas, Manitoba
R9A 1K8

Dear Sir:

Re: 1986 FLUORIDE CONTROL DATA FOR THE PAS

Attached, for review by your Mayor and Council, is a data sheet summarizing the 1986 fluoride program for the Town of The Pas.

All of the required 26 bi-weekly samples were submitted. All contained fluoride in concentrations within the acceptable range of 1.0 to 1.4 mg/l.

This is the second year in a row that the operator, Mr. Russ Yachiw has maintained the fluoride levels within the correct range for the whole year. He and his staff continue to do an excellent job of maintaining and operating the fluoride equipment for the Town of The Pas.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Russ Yachiw

FLUORIDATION CONTROL RECORD

LOCATION: THE PAS
FLUORIDATOR : W&T Series 32-050 Ser# LDF20252
CHEMICAL: Na2Sif6 (DRY)
OPERATOR: Russ Yachiw Ronald F. Stewart
TEST KIT: Hach DR/1 Colorimeter/PH Meter
TELEPHONE: Plant: 623-6338

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.26	1.25	1.25	1.05	-	-
Jan. 18 - Jan. 31	1.27	1.25	1.23	1.26	-	-
Feb. 1 - Feb. 14	1.26	1.30	1.29	0.65	-	-
Feb. 15 - Feb. 28	1.26	1.28	1.29	0.89	-	-
Mar. 1 - Mar. 14	1.40	1.35	1.36	0.39	-	-
Mar. 15 - Mar. 30	1.35	1.35	1.35	1.02	0.15	1.17
Mar. 31 - Apr. 13	1.28	1.22	1.30	0.77	0.15	0.92
Apr. 14 - Apr. 27	1.00	1.05	1.08	0.92	0.15	1.07
Apr. 28 - May 11	1.10	1.08	1.07	0.92	0.15	1.07
May 12 - May 25	1.14	1.18	1.20	0.95	0.14	1.09
May 26 - June 8	1.09	1.10	1.12	0.64	0.15	0.79
June 9 - June 22	1.14	1.10	1.14	1.04	0.15	1.19
June 23 - July 6	1.15	1.25	1.25	0.96	0.15	1.11
July 7 - July 20	1.18	1.18	1.19	1.03	0.15	1.18
July 21 - Aug. 3	1.04	1.18	1.16	0.95	0.15	1.10
Aug. 4 - Aug. 17	1.14	1.09	1.13	0.97	0.15	1.12
Aug. 18 - Aug. 31	1.15	1.12	1.08	1.12	0.14	1.26
Sept. 1 - Sept. 14	1.07	1.03	1.07	1.06	0.15	1.21
Sept. 15 - Sept. 28	1.15	1.18	1.13	1.07	0.15	1.22
Sept. 29 - Oct. 12	1.10	1.15	1.17	1.11	0.15	1.26
Oct. 13 - Oct. 26	1.04	1.18	1.19	1.12	0.15	1.27
Oct. 27 - Nov. 9	1.08	1.08	1.09	1.18	0.15	1.33
Nov. 10 - Nov. 23	1.10	1.08	1.04	1.18	0.15	1.33
Nov. 24 - Dec. 7	1.08	1.10	1.09	1.22	0.15	1.37
Dec. 8 - Dec. 21	0.97	1.00	1.00	1.19	0.15	1.34
Dec. 22 - Jan. 4/87	1.23	1.27	1.22	1.21	0.15	1.36

Average	1.2	1.2	1.2	1.0		1.2
Range	1.0 - 1.4	1.0 - 1.4	1.0 - 1.4	0.4 - 1.3		0.8 - 1.4
% Outside Recommended Limits	0%					
No. of Samples	26	26	26	26		21

Manitoba

Health | Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. James Archer
Secretary - Treasurer
Village of Treherne
P.O. Box 30
Treherne, Manitoba
ROG 2VO

Dear Sir:

RE: 1986 FLUORIDE CONTROL DATA FOR TREHERNE

Attached, for review by your Mayor and Council, is a data sheet summarizing the 1986 fluoride program for the Village of Treherne.

All of the required 26 bi-weekly samples were submitted. Of these, 4, or 15% contained fluoride in concentrations outside the acceptable range of 1.0 to 1.4 mg/l. This represents an improvement over 1985 when 30% of the samples were outside the acceptable range.

The Water Plant Operator, Mr. Gordon Clark, has been putting a very good effort into achieving a perfect record of fluoride results for the Village of Treherne. He is very close to that goal.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Gordon Clark

FLUORIDATION CONTROL RECORD

LOCATION: TREHERNE
CHEMICAL: NaF 4%
TEST KIT: Hach Filterphotometer

FLUORIDATOR : W&T A-745 Ser# LDP1603
OPERATOR: Gordon Clark
TELEPHONE: Off: 723-2044 Home: 723-2411

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.35	1.00	1.04	1.27	0.32	1.59
Jan. 18 - Jan. 31	0.95	1.00	1.01	1.23	0.32	1.55
Feb. 1 - Feb. 14	1.33	1.15	1.08	1.74	0.32	2.06
Feb. 15 - Feb. 28	1.30	1.15	1.17	1.62	0.32	1.94
Mar. 1 - Mar. 14	1.10	1.20	1.17	1.60	0.32	1.92
Mar. 15 - Mar. 30	1.27	1.10	1.13	1.40	0.32	1.72
Mar. 31 - Apr. 13	1.29	1.10	1.13	1.16	0.32	1.48
Apr. 14 - Apr. 27	1.25	1.10	1.15	1.22	0.32	1.54
Apr. 28 - May 11	1.55	1.20	1.20	1.25	0.32	1.57
May 12 - May 25	1.43	1.10	1.14	1.19	0.36	1.57
May 26 - June 8	0.92	1.10	1.15	1.68	0.32	2.00
June 9 - June 22	1.40	1.40	1.31	1.13	0.32	1.45
June 23 - July 6	1.45	1.25	1.27	1.08	0.32	1.40
July 7 - July 20	1.75	1.30	1.30	1.46	0.32	1.78
July 21 - Aug. 3	1.08	1.25	1.28	1.16	0.32	1.48
Aug. 4 - Aug. 17	1.38	1.35	1.45	1.05	0.32	1.37
Aug. 18 - Aug. 31	1.45	1.30	1.26	1.27	0.32	1.59
Sept. 1 - Sept. 14	1.20	1.10	1.13	-	-	-
Sept. 15 - Sept. 28	1.15	1.20	1.23	0.79	0.32	1.11
Sept. 29 - Oct. 12	1.05	1.20	1.19	0.75	0.32	1.07
Oct. 13 - Oct. 26	0.84	1.10	1.17	0.70	0.32	1.02
Oct. 27 - Nov. 9	1.19	1.20	1.13	0.57	0.32	0.89
Nov. 10 - Nov. 23	1.10	1.15	1.20	0.50	0.32	0.82
Nov. 24 - Dec. 7	1.15	1.20	1.15	0.85	0.32	1.17
Dec. 8 - Dec. 21	0.95	1.05	1.10	0.47	0.32	0.79
Dec. 22 - Jan. 4/87	0.96	1.10	1.09	0.51	0.32	0.83

Average	1.2	1.2	1.2	1.1		1.3
Range	0.8 - 1.8	1.0 - 1.4	1.0 - 1.5	0.5 - 1.7		0.8 - 2.0
% Outside Recommended Limits	15%					
No. of Samples	26	26	26	25		25

Manitoba

Health

Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Donald A. Reid
Secretary - Treasurer
Town of Virden
P.O. Box 310
Virden, Manitoba
ROM 2CO

Dear Sir:

RE: 1986 FLUORIDE CONTROL DATA FOR VIRDEN

Attached, for review by your Mayor and Council, is a data sheet summarizing the 1986 fluoride program for the Town of Virden.

25 of the 26 bi-weekly samples were submitted. Of these, 6, or 24% contained fluoride in concentration outside the recommended range of 1.0 to 1.4 mg/l.

Water works superintendent, Mr. Dave Penney and his staff have done a good job of maintaining the fluoride equipment.

It is my understanding that the Town of Virden recognizes 1.0 mg/l as being the optimum for fluoride concentration in its drinking water. The Canadian Dental Association as well as Manitoba Health now promote an optimum fluoride concentration in drinking water of 1.2 mg/l.

If you wish to investigate this further, please contact Mrs. Rhonda Plett, Dental Health Educator, at the above address.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Dave Penney

FLUORIDATION CONTROL RECORD

LOCATION: VIRDEN
CHEMICAL: NaF 4%
TEST KIT: Hach DR-100 Colorimeter

FLUORIDATOR : W&T A-745 Ser #LDP 813
OPERATOR: Dave Penny - Town Supt.
TELEPHONE: Plant: 748-1468 STP: 748-3074
Dana Hirst
John McDonald WTP Operators

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.07	1.15	1.15	0.55	0.44	0.99
Jan. 18 - Jan. 31	1.09	1.09	1.09	0.60	0.44	1.04
Feb. 1 - Feb. 14	1.00	1.10	1.10	0.53	0.44	0.97
Feb. 15 - Feb. 28	1.15	1.10	1.11	0.66	0.44	1.10
Mar. 1 - Mar. 14	1.13	1.02	1.02	0.68	0.44	1.12
Mar. 15 - Mar. 30	1.18	-	1.16	0.76	0.44	1.20
Mar. 31 - Apr. 13	1.14	1.06	0.76	0.44	1.20	-
Apr. 14 - Apr. 27	1.03	1.10	1.14	0.64	0.44	1.08
Apr. 28 - May 11	1.14	1.12	1.12	0.57	0.44	1.00
May 12 - May 25	-	1.12	1.11	0.52	0.44	0.96
May 26 - June 8	0.93	-	1.04	0.56	0.44	1.00
June 9 - June 22	0.71	0.90	1.01	0.75	0.44	1.19
June 23 - July 6	1.00	1.07	1.07	0.55	0.44	0.99
July 7 - July 20	1.08	1.04	1.04	0.57	0.44	1.01
July 21 - Aug. 3	1.07	1.10	1.08	0.55	0.44	0.99
Aug. 4 - Aug. 17	1.05	1.05	1.05	0.48	0.44	0.92
Aug. 18 - Aug. 31	0.95	1.02	1.03	0.50	0.44	0.94
Sept. 1 - Sept. 14	1.05	1.06	1.06	0.52	0.44	0.96
Sept. 15 - Sept. 28	0.72	1.05	1.05	0.25	0.44	0.69
Sept. 29 - Oct. 12	0.55	0.95	0.95	0.60	0.44	1.04
Oct. 13 - Oct. 26	1.05	1.00	1.00	0.69	0.44	1.13
Oct. 27 - Nov. 9	1.09	1.01	1.01	0.47	0.44	0.91
Nov. 10 - Nov. 23	1.56	1.08	1.08	0.80	0.44	1.24
Nov. 24 - Dec. 7	1.10	0.99	0.99	0.58	0.44	1.02
Dec. 8 - Dec. 21	1.15	1.10	1.10	0.51	0.44	0.95
Dec. 22 - Jan. 4/87	0.62	1.06	1.05	0.19	0.44	0.63

Average	1.0	1.1	1.1	0.6		1.0
Range	0.6 - 1.6	0.8 - 1.2	0.8 - 1.2	0.2 - 0.8		0.6 - 1.2
% Outside Recommended Limits	24%					
No. of Samples	25	24	26	26		25

Manitoba

Health Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. Jim Dunlop
Director
Gimli Industrial Park
P.O. Box 40
Gimli, Manitoba
ROC 1B0

Dear Sir:

RE: 1986 FLUORIDE CONTROL DATA FOR GIMLI INDUSTRIAL PARK

The attached data summarizes the 1986 fluoride program for Gimli Industrial Park.

25 of the required 26 bi-weekly samples were submitted. All contained fluoride in concentrations within the acceptable range of 1.0 to 1.4 mg/l.

Mr. Dave Walker, the Water Treatment Plant Operator, has once again done an excellent job of maintaining and operating the fluoridation equipment for Gimli Industrial Park.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.
c.c. Mr. Dave Walker

FLUORIDATION CONTROL RECORD

LOCATION: GIMLI (Properties)
FLUORIDATOR : W&T 1-747
CHEMICAL: NaF 4%
OPERATOR: Dave Walker
TEST KIT: Hach Spectrophotometer
TELEPHONE: WTP: 642-8420

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.20	1.20	1.20	1.19	0.43	1.62
Jan. 18 - Jan. 31	1.12	1.18	1.19	0.92	0.43	1.35
Feb. 1 - Feb. 14	1.25	1.20	1.20	0.77	0.43	1.20
Feb. 15 - Feb. 28	1.20	1.20	1.19	0.75	0.43	1.18
Mar. 1 - Mar. 14	1.18	1.19	1.19	0.65	0.43	1.08
Mar. 15 - Mar. 30	1.15	1.17	1.19	0.63	0.43	1.06
Mar. 31 - Apr. 13	1.00	1.05	0.86	0.60	0.43	1.03
Apr. 14 - Apr. 27	1.07	1.05	1.09	0.71	0.43	1.14
Apr. 28 - May 11	1.18	1.15	1.09	0.62	0.43	1.05
May 12 - May 25	1.13	-	1.17	0.59	0.43	1.02
May 26 - June 8	1.15	1.15	1.15	0.62	0.43	1.05
June 9 - June 22	1.18	1.19	1.18	0.64	0.43	1.07
June 23 - July 6	1.20	1.19	1.19	0.70	0.43	1.13
July 7 - July 20	1.15	1.17	1.15	0.54	0.43	0.97
July 21 - Aug. 3	1.05	1.15	1.17	0.63	0.43	1.06
Aug. 4 - Aug. 17	1.17	1.16	1.17	0.65	[illegible]	1.08
Aug. 18 - Aug. 31	1.14	1.08	1.16	0.55	0.43	0.98
Sept. 1 - Sept. 14	1.18	1.15	1.15	0.65	0.43	1.08
Sept. 15 - Sept. 28	1.17	1.19	1.18	0.66	0.43	1.09
Sept. 29 - Oct. 12	1.07	-	1.16	0.63	0.43	1.06
Oct. 13 - Oct. 26	1.06	1.10	1.15	0.53	0.43	0.96
Oct. 27 - Nov. 9	1.05	1.16	1.16	0.57	0.43	1.00
Nov. 10 - Nov. 23	1.14	1.04	1.13	0.57	0.43	1.00
Nov. 24 - Dec. 7	1.08	1.05	1.15	0.61	0.43	1.04
Dec. 8 - Dec. 21	1.13	1.10	1.15	0.61	0.43	1.04
Dec. 22 - Jan. 4/87	1.14	1.15	1.15	0.60	0.43	1.03

Average	1.14	1.13	1.15	0.37		1.10
Range	1.0 - 1.3	1.0 - 1.2	0.9 - 1.2	0.5 - 1.2		1.0 - 1.5
% Outside Recommended Limits	0%					
No. of Samples	25	24	26	26		26

Manitoba

Health Dental Health

3rd Floor
831 Portage Avenue
Winnipeg, Manitoba, CANADA
R3G 0N6

(204) 945-6685

File 7.2.1

March 16, 1987

Mr. I. Henderson, P. Eng.
Waterworks Engineer
Works and Operations Division
City of Winnipeg
1500 Plessis Road
P.O. Box 178
Winnipeg, Manitoba
R2C 2Z9

Dear Sir:

RE: 1986 FLUORIDE CONTROL DATA FOR WINNIPEG

The attached data summarizes the results from water samples submitted by your staff and analyzed by our laboratories in 1986 for fluoride content.

Yours truly,

Jim Senka, B.Sc.
Fluoridation Officer

JS/lk
attach.

FLUORIDATION CONTROL RECORD

LOCATION: WINNIPEG

CHEMICAL: H_2SiF_6 - SIE

TEST KIT: _____

FLUORIDATOR : _____

OPERATOR: I.B. Henderson

TELEPHONE: 237-4203

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	MONTHLY FEED	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.07		JANUARY			
Jan. 18 - Jan. 31	1.04					
Feb. 1 - Feb. 14	1.04		FEBRUARY	0.80		
Feb. 15 - Feb. 28	0.80					
Mar. 1 - Mar. 14	0.94		MARCH	0.98		
Mar. 15 - Mar. 30	1.00					
M[illegible] 31 - Apr. 13	1.05		APRIL	0.86		
Apr. 14 - Apr. 27	0.95					
Apr. 28 - May 11	0.97		MAY	0.88		
May 12 - May 25	0.73					
May 26 - June 8	1.00		JUNE	0.98		
June 9 - June 22	0.93					
June 23 - July 6	1.10		JULY	0.99		
July 7 - July 20	1.07					
July 21 - Aug. 3	1.03					
Aug. 4 - Aug. 17	1.05		AUGUST	0.94		
Aug. 18 - Aug. 31	1.02					
Sept. 1 - Sept. 14	1.00		SEPTEMBER			
Sept. 15 - Sept. 28	0.88					
Sept. 29 - Oct. 12	0.90		OCTOBER	0.71		
Oct. 13 - Oct. 26	0.94					
Oct. 27 - Nov. 9	0.84		NOVEMBER	0.99		
Nov. 10 - Nov. 23	0.88					
Nov. 24 - Dec. 7	0.93		DECEMBER			
Dec. 8 - Dec. 21	1.05					
Dec. 22 - Jan. 4/87	1.05					

Average	1.0					
Range	0.7 - 1.1					
% Outside Recommended Limits	38%					
No. of Samples	26					

FLUORIDATION CONTROL RECORD

LOCATION: CFS BEAUSEJOUR

CHEMICAL: _____

TEST KIT: _____

FLUORIDATOR : _____

OPERATOR: _____

TELEPHONE: _____

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.21					
Jan. 18 - Jan. 31	1.12					
Feb. 1 - Feb. 14	1.22					
Feb. 15 - Feb. 28	1.20					
Mar. 1 - Mar. 14						
Mar. 15 - Mar. 30						
Mar. 31 - Apr. 13						
Apr. 14 - Apr. 27	1.29					
Apr. 28 - May 11	1.25					
May 12 - May 25	1.17					
May 26 - June 8						
June 9 - June 22						
June 23 - July 6						
July 7 - July 20						
July 21 - Aug. 3						
Aug. 4 - Aug. 17						
Aug. 18 - Aug. 31						
Sept. 1 - Sept. 14						
Sept. 15 - Sept. 28						
Sept. 29 - Oct. 12						
Oct. 13 - Oct. 26						
Oct. 27 - Nov. 9						
Nov. 10 - Nov. 23						
Nov. 24 - Dec. 7						
Dec. 8 - Dec. 21						
Dec. 22 - Jan. 4/87						

Average	1.21					
Range	1.1 - 1.3					
% Outside Recommended Limits	0%					
No. of Samples	7					

FLUORIDATION CONTROL RECORD

LOCATION: CES GYPSUMVILLE

CHEMICAL: _____

TEST KIT: _____

FLUORIDATOR : _____

OPERATOR: Dave Hornick

TELEPHONE: 659-2611 ext. 316
power plant 373

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	1.20					
Jan. 18 - Jan. 31	1.13					
Feb. 1 - Feb. 14	1.08					
Feb. 15 - Feb. 28	1.15					
Mar. 1 - Mar. 14	1.15					
Mar. 15 - Mar. 30	1.12					
Mar. 31 - Apr. 13	1.05					
Apr. 14 - Apr. 27	1.12					
Apr. 28 - May 11	1.24					
May 12 - May 25	1.10					
May 26 - June 8	1.00					
June 9 - June 22	0.90					
June 23 - July 6	1.14					
July 7 - July 20	1.17					
July 21 - Aug. 3	1.20					
Aug. 4 - Aug. 17	1.25					
Aug. 18 - Aug. 31	1.22					
Sept. 1 - Sept. 14	1.05					
Sept. 15 - Sept. 28	1.32					
Sept. 29 - Oct. 12	1.23					
Oct. 13 - Oct. 26	1.16					
Oct. 27 - Nov. 9	1.17					
Nov. 10 - Nov. 23	1.13					
Nov. 24 - Dec. 7	1.12					
Dec. 8 - Dec. 21	1.08					
Dec. 22 - Jan. 4/87	1.13					

Average	1.14					
Range	0.90 - 1.32					
% Outside Recommended Limits	4%					
No. of Samples	26					

FLUORIDATION CONTROL RECORD

LOCATION: CFS SHILO

FLUORIDATOR : _____

CHEMICAL: _____

OPERATOR: _____

TEST KIT: _____

TELEPHONE: _____

SAMPLING PERIOD	TECH. SERV. COMPOSITE	OPERATOR COMPOSITE	AVERAGE DAILY	CALC. DOSAGE	NATURAL CONTENT	THEORETICAL CONTENT
Jan. 4 - Jan. 17/86	0.99					
Jan. 18 - Jan. 31	1.03					
Feb. 1 - Feb. 14	1.04					
Feb. 15 - Feb. 28	1.06					
Mar. 1 - Mar. 14	0.93					
Mar. 15 - Mar. 30	1.08					
Mar. 31 - Apr. 13	1.10					
Apr. 14 - Apr. 27	1.17					
Apr. 28 - May 11	1.10					
May 12 - May 25	1.07					
May 26 - June 8	1.15					
June 9 - June 22	1.24					
June 23 - July 6	1.13					
July 7 - July 20	0.85					
July 21 - Aug. 3	0.60					
Aug. 4 - Aug. 17	0.71					
Aug. 18 - Aug. 31	0.95					
Sept. 1 - Sept. 14	0.85					
Sept. 15 - Sept. 28	0.97					
Sept. 29 - Oct. 12	0.97					
Oct. 13 - Oct. 26	0.86					
Oct. 27 - Nov. 9	1.15					
Nov. 10 - Nov. 23	1.25					
Nov. 24 - Dec. 7	1.05					
Dec. 8 - Dec. 21	1.03					
Dec. 22 - Jan. 4/87						

Average	1.04					
Range	0.6 - 1.3					
% Outside Recommended Limits	24%					
No. of Samples	25					

FLUORIDE LEVELS/1986

TABLE I

TOWN \ PERIOD NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
ALTONA	1.33	1.22	1.25	1.20	1.15	1.17	1.00	1.10	1.10	1.20	1.37	1.35	1.50	1.75	1.55	1.05	1.13	1.13	1.12	1.00	0.98	0.73	0.74	0.81	0.90	0.85
BALDUR		1.16	1.15	1.20	1.17	1.12	1.16	1.06	1.05	1.00	1.15	1.00	1.00	1.05	1.10	1.06	1.05	1.17	1.06	1.06	1.05	1.05	1.05	1.00	1.04	0.95
BOISSEVAIN	1.10	0.88	1.20	1.01	1.03	0.87	0.97	1.00	1.15	1.00	0.85	0.93	0.86	1.75		1.05	1.40			1.53	1.64	1.60	1.45	1.23	1.36	1.20
BRANDON	1.25	1.07	1.15	1.35	1.33	1.17	1.22	1.25	1.28	1.17	1.16	1.09	1.23	1.14	1.20	1.22	1.18	1.20	1.34	1.14	1.05	1.00	1.00	1.04	1.17	1.17
CARMAN	0.77	0.85	0.85	1.13		1.05	0.93	1.00	1.12	1.22	1.50	1.30	1.45	1.00	1.08	1.14	1.13	1.10	1.40	1.26	1.20	1.20	1.00	1.13	0.99	1.00
CRANBERRY PORTAGE	1.12	0.86	1.12		1.16	1.10	1.17	0.76	1.07	1.05	1.06	1.04	0.89						0.66	1.04	1.12	1.15	1.13	1.06	1.25	1.15
DAUPHIN	0.71	0.72	0.79	0.90	0.75	0.89	0.89	1.07	0.83	1.23	0.85	0.76	1.01	0.80	0.78	0.80	0.87	1.06	0.68		0.25					
DELORAINE	0.95	1.17	1.20	1.10	1.03	0.99	1.00	1.04	1.15	1.09	1.15	1.16	1.10	1.25	1.20	1.06	0.85	0.85	1.08	1.05	1.01	0.84	1.06	0.90	1.04	1.06
ERICKSON			0.93	1.06	1.00	0.83	1.05	1.14	1.00	1.12	1.03	0.96	1.05	1.10	1.45	0.77	1.00	1.03	1.10	1.45	1.20	0.66	1.20	1.25	1.45	1.00
GILLAM	1.21	1.40	1.25	1.25	1.20			1.13	1.14	1.00		1.00	1.16			1.35	1.03	0.98						1.25		1.07
GIMLI (TOWN)	1.04	1.13	1.08	1.10	1.08	1.19	1.07	1.18	1.15	1.14	1.07	1.08	1.14	1.07	1.00	1.12	1.09	1.00	1.12	0.98	1.10	1.00	0.97	1.05	1.00	1.15
GLADSTONE	1.16	1.03	1.15	1.10	1.05	1.09	1.18	1.25	1.15	1.12	1.23	1.05	0.97	1.07	1.07	0.78	1 7	1.25	1.50	1.15	1.00	1.05	1.06	1.00	1.15	1.15
HAMIOTA	1.07	1.33	1.22	1.29	1.15	1.02	1.10	1.55	0.97									1.50	1.12	0.94	0.97	1.08	1.20	1.04	1.00	0.66
HARTNEY	0.99	0.97	1.15	1.20	1.17	0.95	1.18	1.50	1.18	1.25	0.83	1.15	1.13	1.30	1.20	1.27	1.30	1.45	1.34	0.98	1.04	1.13	1.05	1.24	1.15	1.00
KILLARNEY	1.53	1.48	1.57	1.15	1.15	0.78	1.05	0.90	0.57	1.09	1.00	0.88	0.91	0.96	0.45	1.35	1.55	1.25	1.04	1.40	1.03	1.35	1.14	1.23	1.22	0.77
LAC DU BONNET		1.13	1.20		1.17	1.13	1.30	1.23		1.28	1.33	1.40	1.25		1.20	0.99	1.22	1.35	1.55	1.37	1.13	1.23	1.20	1.47	1.32	1.23
MACGREGOR	1.22	1.13	1.25	1.34	1.23	1.09	1.24	1.50	1.55	1.16	1.10	1.22	1.10	1.35	1.25	1.16	1.17	1.20	1.23	1.18	1.04	1.23	1.25	1.24	1.28	1.13
MANITOU	1.11	1.13	1.15	1.50	1.08	1.16	1.15	1.17	1.16	1.18	1.20	1.18	1.18	1.18	1.08	1.08	1.17	1.10	1.12	1.00	1.05	1.16	1.18	1.08	1.15	1.15
MCCREARY	1.18	1.16	1.20	1.15	1.08	1.25	1.34	1.17	1.10	1.10	1.16	1.18	1.10	1.28	1.32	1.18	1.18	1.25	1.13	1.02	1.06	1.14	1.20	1.20	1.20	1.25
MINNEDOSA									1.24	1.35	1.40	1.25			1.36	1.35	1.22	1.26	1.26	1.34	1.26	1.40	1.50	1.00	1.10	1.00
MORDEN	1.07	1.12	1.05	0.99	1.03	0.77	0.93	1.43	1.45	1.07	0.97	1.09	1.13	1.35	1.25	1.16	1.13	1.09	1.08	0.90	0.90	1.00	1.18	1.30	1.65	1.23
NEEPAWA	1.07	1.03	1.10	1.10	1.05	1.12	1.15	1.03	0.93	1.09	1.32	1.15	1.34	1.50	1.40	1.32	1.40	1.25	1.13	1.17	1.30	1.35	1.43	1.12	1.10	1.13
PILOT MOUND	1.11	0.99	1.10	1.01	1.05	0.95	1.05	0.89	0.93	1.04	1.05	0.82	1.01	1.20	1.20	1.32	1.34	1.25	1.25	1.17	1.24	1.23	1.25	1.25	1.22	1.28
PINAWA	0.98	0.78	1.00	0.80	0.84	0.88	0.92	1.06	1.10	1.09	0.83	1.05	0.91	1.24	0.93	0.73	0.90	1.17	1.08	0.77	0.90	1.05	1.26	1.35	1.07	1.15
PORTAGE	1.25	1.18	1.22	1.15	1.23	1.35	1.13	1.10	1.05	1.17	1.18	1.22	1.06	1.35	1.28	1.24	1.27	1.25	1.15	1.18	1.15	1.12	1.18	1.23	1.22	1.25
RESTON	1.13	1.09	1.00	1.10	1.17	1.13	1.18	0.97	1.10	1.17	1.14	1.00	1.05	1.12	1.10		1.13	1.35	1.16	1.25	1.15	1.13	1.17	1.20	1.25	1.15
RIVERS																						0.97	0.80	0.46	0.90	0.77
ROBLIN	1.08	0.95	1.00	1.15	1.17	1.14	1.18	0.88	1.01	1.05	1.06	0.98	1.15	0.91	1.05	0.95	1.04	1.10	1.17	1.13	1.05	1.23	1.26	1.17	1.22	1.19
ROSSBURN		1.07	0.80	0.90	0.94	1.00	0.94	1.00	0.93	1.00	1.05	0.96		1.05	0.93	1.00	1.04	1.19	1.40	1.08	0.86	1.05	1.06	1.65	1.00	0.18
RUSSELL	1.02	1.08	1.07	0.99	1.05	0.95	1.08	1.03	1.00	1.14	1.33	1.18	1.23	1.24	1.25	1.14	1.17	1.24	1.00	1.00	0.98	1.06	1.26	1.35	1.38	1.28
SOMIS	1.12	1.12	1.15	1.20	1.18	1.13	1.08	1.15	1.18	1.14	1.06	1.18	1.28	1.20	1.08	1.08	1.13	1.00	1.07	1.17	1.05	1.18	1.05	1.12	1.25	1.05
STEINBACH	1.07	1.08	1.16	1.06	1.09	1.04	1.05	1.00	1.16	1.23	1.20	1.16	1.13	1.25	1.10	1.23	1.20	1.15	1.30	1.15	1.20	1.15	1.30	1.28	1.22	1.23
SWAN RIVER	0.98	1.07	1.14	0.90	1.23	1.05	1.00	1.06	1.00	0.97	1.32	1.04	1.30	1.35	1.08	1.38	1.00	1.20	1.23	0.92	1.08	1.09	1.10	1.15	1.10	1.50
THE PAS	1.26	1.27	1.26	1.26	1.40	1.35	1.28	1.00	1.10	1.14	1.09	1.14	1.15	1.18	1.04	1.14	1.15	1.07	1.15	1.10	1.04	1.08	1.10	1.08	0.97	1.23
TREHERNE	1.35	0.95	1.33	1.30	1.10	1.27	1.29	1.25	1.55	1.43	0.92	1.40	1.45	1.75	1.08	1.38	1.45	1.20	1.15	1.05	0.84	1.19	1.10	1.15	0.95	0.96
VIRDEN	1.07	1.09	1.00	1.15	1.13	1.18	1.14	1.03	1.14		0.93	0.71	1.00	1.08	1.07	1.05	0.95	1.05	0.72	0.55	1.05	1.09	1.56	1.10	1.15	0.62
WINKLER	1.20	1.13	1.08	1.20	1.13	1.15	1.15	1.13	1.13	1.10	0.95	1.00	1.00	1.07	0.99	1.14	1.18	1.07	1.21	0.95	1.15	1.20	1.10	1.17	1.17	1.17
WINNIPEG	1.07	1.04	1.04	0.80	0.94	1.00	1.05	0.95	0.97	0.73	1.00	0.93	1.10	1.07	1.03	1.05	1.02	1.00	0.68	0.90	0.94	0.64	0.68	0.93	1.05	1.05
GIMLI	1.20	1.12	1.25	1.20	1.18	1.15	1.00	1.07	1.18	1.13	1.15	1.18	1.20	1.15	1.05	1.17	1.14	1.16	1.17	1.07	1.06	1.05	1.14	1.06	1.13	1.14
CFS BRAUSEJOUR	1.21	1.12	1.22	1.20				1.29	1.25	1.17																
CFS GYPSUMVILLE	1.20	1.13	1.08	1.15	1.15	1.12	1.05	1.12	1.24	1.10	1.00	0.90	1.14	1.17	1.20	1.25	1.22	1.05	1.32	1.23	1.16	1.17	1.13	1.12	1.08	1.13
CFS SHILO	0.99	1.03	1.04	1.06	0.93	1.08	1.10	1.17	1.10	1.07	1.15	1.24	1.13	0.85	0.60	0.71	0.95	0.85	0.97	0.97	0.66	1.15	1.25	1.05	1.03	